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A TREATISE

ON

THE CULTURE

OF

THE CUCUMBER:

SHEWING

A NEW AND ADVANTAGEOUS METHOD OF CULTIVATING THAT PLANT,

WITH

FULL DIRECTIONS FOR THE MANAGEMENT THEREOF, AND THE DEGREE OF HEAT IT REQUIRES ON EVERY DAY OF THE YEAR;

AND

A METEOROLOGICAL JOURNAL of the Weather and Temperature of the Climate in Lat. 51° 20′ North, Long. 0° 1′ East of London.

BY JAMES M'PHAIL,

GARDENER TO THE RIGHT HON. LORD HAWKESBURY.

SECOND EDITION.

LONDON:

PRINTED FOR T. CADELL, JUNIOR, AND W. DAVIES, (SUCCESSORS TO MR. CADELL) IN THE STRAND; AND BELL AND BRADFUTE, AT EDINBURGH.

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Complaints among Gardeners having been made respecting the high price of the Treatise on the Culture of the Cucumber, for the accommodation of these, it is now separated from the Essay on Agriculture, which reduces the price to Five Shillings in boards.

The Hints and Observations on Agriculture, with a copious Introduction, are sold by the Author, and at the Booksellers.

ADVERTISEMENT.

THOSE gardeners of my acquaintance, to whom I have explained the principles of my new method of cultivating and managing the Cucumber Plant, approve of it; but they, in general, ſay, Of what uſe will your method be to us, ſeeing we cannot put it in practice without the knowledge and approbation of our maſters; becauſe the bed muſt be built of bricks? This is, undoubtedly, a juſt and weighty obſervation; but, conſidering the ſmall expenſe* attending the building of a brick bed after my plan, and the many advantages ariſing therefrom, I cannot, for a moment, entertain a doubt that gentlemen will have the leaſt objection to adopting the method: For I have always found, and I believe, moſt gentlemen are forward and liberal in encouraging gardening in all its branches, particularly thoſe which furniſh their

* To build a bed for a three-light frame will require only about 700 bricks, 160 tiles, and lime, and labour.

tables with a ſucceſſion of choice, wholeſome, uſeful, rare fruits and vegetables.

But granting that gentlemen will not allow their gardeners a brick bed, yet I am in hopes that the directions which I have given relative to ſtopping the plants, ſetting the fruit, mould, heat, water, air, &c. will prove uſeful to many, eſpecially to young men, even in the management and culture of the cucumber on a dung bed: This will infallibly be the caſe, if that be true, in general, which is ſaid by a reſpectable modern author, I mean Dr. Hunter; for in his edition of Evelyn's Silva, publiſhed in the year 1786, vol. ii. p. 143, he ſays, "The gardeners adviſe that the barren flowers of cucumber plants ſhould be carefully plucked off, by reaſon they think theſe deprive the plant too much of its nouriſhment; but, without doubt, they are miſtaken; for the reaſon why the fruit drops off is, for want of being impregnated, and not for want of nouriſhment, as is the vulgar opinion." And nearly the ſame obſervations are made by the Rev. Robert Pierſon, and publiſhed in Hunter's Georgical Eſſays.

Both theſe learned gentlemen cenſure gardeners in general without giving ſufficient directions themſelves for performing what we gardeners call ſetting the fruit. This ſpirit of cenſo-

cenſoriouſneſs may eaſily be accounted for, inaſmuch as theſe eminent philoſophizing literary gentlemen have the theory, but are without the practice*: They, therefore, attribute the frequent failure of gardeners' crops of cucumbers to their not knowing that the plants bear male and female flowers; but I am clearly of opinion (and I doubt not but in this I ſhall have a majority, at leaſt, of practical gardeners on my ſide), that the frequent failure of crops of cucumbers ariſes not ſo much from ignorance in gardeners reſpecting the plants bearing male and female flowers, as from cauſes with which theſe philoſophers are probably not ſo well acquainted.

For my own part, rather than be without a brick bed for the culture of early cucumbers, I would be at the expenſe myſelf: The loſs would be only that of the lime and labour, for the bricks retain their goodneſs.

It is known that I offered to publiſh a method of deſtroying the inſects, and of healing the diſeaſes which are natural to, and frequently deſtructive of,

* An obſtacle to the progreſs of arts and ſciences has been the neglect of practice in theoretical men, and the ignorance or contempt of theory in mere practical men; and ſeveral, who have written on gardening, have taken more pains, and ſhown greater abilities in informing gentlemen what gardeners ought to do, than they have done in teaching gardeners how to do.

the pine-apple, melon, and cucumber plants. Some people may therefore be ſomewhat diſappointed when they perceive that in this volume there is no receipt, remedy, or cure, given for that purpoſe.

Had I obtained ſubſcriptions ſufficient to have defrayed the expenſe, I meant to have publiſhed another volume, including my method of cultivating the melon and pine-apple; and to have divulged a ſingular way of extirpating the inſects, and of healing the diſeaſes of the ſaid plants; but having come ſhort in my ſubſcription liſt, for the preſent I have confined myſelf to the culture of the cucumber only: But for the ſatisfaction of thoſe who are troubled with diſeaſes or inſects in the progreſs of the management of their cucumber plants, I inform them, that if they chuſe to adopt my method of culture, which is the moſt cheap, ſimple, ſafe, and eaſy of any, neither diſeaſes * nor inſects will moleſt them, provided however that the ſeeds

* Snails and ſlugs may ſometimes be brought into the frames along with the mould. Theſe may be expelled by the hand; but before the plants are ſet in the frames, boiling water may be poured plentifully on the mould, flues, and frames, which will effectually deſtroy all inſects that may have got in while the lights were off, or have been brought in among the mould.

Mice in dung beds are often very troubleſome; but my brick bed is ſo conſtructed that no mouſe can enter.

which

which they ſow, be free of infection; for it is an inconteſtable fact that diſeaſes are ſometimes hereditary in vegetables as well as in animals. And further, if any are doubtful of their ſeeds not being free of infection, or are not of a good ſort, if they chuſe to ſend or write to me free of poſtage, I will ſend them, gratis, ſeeds of the cucumber of my own ſaving, perfectly free of infection, and of as good a ſort for forcing as any in the kingdom.

In England ſubſcriptions are become exceedingly frequent, and their frequency has rendered them liable to ſome abuſes which begin to give them diſcredit.

In the year 1776, Mr. John Kennedy, gardener to Sir Thomas Gaſcoign, publiſhed a book, wherein he acknowledges that the pine-apple plants under his management were for ſeveral years in a very unproſperous ſtate, occaſioned by their being infeſted with inſects, and that he tried every remedy that had been before publiſhed, but found them all ineffectual; but that at laſt he found out a never-failing remedy; this remedy he in that book publiſhed, and which is generally known.

In the year 1779, Mr. William Speechly, gardener to the Duke of Portland, publiſhed a pamphlet, price one guinea, on the culture of

the pine-apple, containing 174 pages, 72 of which are taken up in deſcribing the different ſpecies of inſects which infeſt forcing-houſes and frames, and in giving receipts and preſcriptions for their deſtruction. This author imitates the former, in ſaying that he tried every method he had heard of, both public and private, but all to no purpoſe; but that after many experiments, he luckily happened to fall on a never-failing remedy; this remedy, he ſays he has given with exact preciſion.

Theſe two authors acknowledge the publication of many remedies, but pronounce them all ineffectual, except thoſe of t heir own invention, which each in his turn holds forth as being infallible. But in this they ſeem to have written rather uncandidly; becauſe they have neither quoted thoſe authors who invented and publiſhed remedies before they did, nor have made compariſon betwixt thoſe ever-failing, and their never-failing remedies.

Again, in the year 1791, Mr. William Forſyth, gardener to the King, at Kenſington, publiſhed a pamphlet, ſetting forth a never-failing cure for the diſeaſes, defects, and injuries, in all kinds of fruit and foreſt trees. This author ſays, "He ſubmits to the experience of the Public, a remedy diſcovered by himſelf, which has been applied

applied with never-failing ſucceſs to all kinds of fruit-trees; and has not only prevented further decay, but actually reſtored vegetation, and increaſed fruitfulneſs even in ſuch as were apparently barren and decayed." And, in a letter to the commiſſioners of the land revenue, he declares that "he is able to ſuggeſt a complete remedy for all the defects (meaning, as may be gathered from the Commiſſioners' letter, the "defects in growing trees of all ages which have ſuſtained damage from any cauſe whatever"); "and that remedy he ſuppoſes to be known only to himſelf, as it is not a remedy drawn from books, or learned from men." Theſe aſſertions may, for any thing I know, be true; but in peruſing Evelyn's Silva, which was firſt publiſhed in the year 1678, in vol. ii. p. 149, I read the following paragraph, which has, at leaſt, a great ſimilarity to that wonderful remedy diſcovered and divulged by Mr. Forſyth:

"Cankers, of all others the moſt pernicious, corroding, eating to the heart, and difficult to cure (whether cauſed by ſtrokes or galling, or by hot and burning land), are to be cut out to the quick, the ſcars implaſtered with tar mingled with oil, and over that a ſpreading of loam, or elſe with clay and dung."

The

The treatiſe written by Mr. Kennedy, as alſo that by Mr. Speechly, were publiſhed by ſubſcription; and the one written by Mr. Forſyth was, as I have been informed, intended for ſubſcription; but government thinking the diſcloſure of the ſecret might tend to the benefit of the public, gave the author a reward for its diſcovery.

Notwithſtanding all this, it is ſtill acknowledged by thoſe whoſe knowledge is not local, that on an average one half, at leaſt, of the melon and cucumber plants raiſed in this kingdom yearly, are, by diſeaſes and inſects, brought into a ſickly ſtate *, and frequently entirely deſtroyed: And, perhaps, not one houſe of pine-apple plants in ten is, at this time, clear of diſeaſes or inſects: The ſame may be ſaid in reſpect to the number of fruit and foreſt trees. This, to every intelligent obſerver, being evidently the caſe, there is ſtill room for others to come forward, and offer methods to effect that which, in fact, is not yet effected.

Of all thoſe who have publiſhed receipts or remedies for the deſtruction of inſects on the pine-apple plant, none, to my knowledge, have

* When plants are in a ſickly ſtate they cannot produce good or healthy fruit.

ever even pretended to cleanſe an infected hot-houſe, without moving, ſhifting, cutting off the roots of the plants, waſhing, removing the tan, fumigating the houſe with ſulphur, &c.; and after all this trouble and expenſe, if there happen to be left alive in the houſe, or on the plants, but one pair of male and female inſects (even admitting the doctrine of univocal generation only), theſe will ſpeedily produce a numerous offspring.

Theſe few quotations and obſervations prove to a demonſtration, that in coming forward with a profeſſion of being in poſſeſſion of an efficacious remedy, which is not made public, I only follow ſtale precedents; and although many have not become ſubſcribers to my intended work, yet the number which have, convinces me that the method is ſtill wanted and ſought for; and I believe nothing ſo much hinders it from receiving more encouragement, as a general belief of its proving as little efficacious as thoſe noſtrums which have already met with ample encouragement for the bringing them into public view.

Having with mature deliberation conſidered theſe matters, I reſolve to perſevere in offering to publiſh my method, and if it ſhall happen that I am enabled ſo to do, it will accompany a Treatiſe

a Treatiſe on the Culture of the Melon and Pine-apple; and I mean to compare my ſcheme of deſtroying the inſects and healing the diſeaſes of the aforeſaid plants with thoſe methods which are already publiſhed; and in particular with thoſe of the three authors whom I have quoted, and of whoſe writings I deſign taking a retroſpective view, not for the purpoſe of depreciation, but for that of inveſtigation, and that the Public may be able clearly to ſee whoſe method is the moſt preferable for healing the diſeaſes, and for deſtroying the inſects, which are accounted detrimental to vegetation.

Mr. Speechly, after giving his receipt for the deſtruction of thoſe inſects which infeſt the pine-apple plant, ſuggeſts that a better and more eaſy remedy than his own might be invented; and for this end, he recommends that boiling water be poured upon quickſilver or mercury, and that the pine-apple plants be conſtantly watered with this water, which he ſuppoſes would be ſo impregnated by means of the quick-ſilver, that the juices of the plants would there-by in courſe of time be ſo changed, that inſtead of continuing to be the natural and proper ſub-ſiſtence of the inſects, they would become poiſon-ous to them. Theſe and ſuch-like ſuggeſtions are the fanciful imaginations of the mere ſpe-

culative

culative theoriſt, and to the theoriſt only would I recommend the putting ſuch methods into practice; all gardeners, farmers, and cultivators, of whatever name, deſcription, or denomination, I would caution againſt trying or putting into practice any theoretical experiments or methods whatever, which in any way tend to vitiate or ſpoil the active juices of plants; but, on the contrary, would recommend and adviſe them to endeavour to feed their plants at all times with wholeſome nutritive food. For ſuppoſing water to be impregnated with quick-ſilver, mercury, or ſuch-like, would the plants receive ſuch water as food? and if they did, would their juices be by it ſo changed as to become poiſonous to the inſects? and if they were, would it not be dangerous for man to eat the fruit which derived its nouriſhment from the juices thus vitiated?

Inſects are endowed with certain and determinate powers and inclinations, impreſſed on them by the almighty Creator; by which they ſeem arbitrarily, and without their own knowledge or conſciouſneſs, directed and impelled to the performance of thoſe various operations which they execute with ſuch unremitting induſtry and art. They have a natural diſpoſition or ſagacity, by virtue whereof they are enabled

to

to provide for themſelves, and know what is good for them, and are determined to propagate their ſpecies. This is inſtinct, and is put into action by the natural and primitive principle of ſelf-love, or by a love of pleaſure, and averſion to pain; producing a voluntary inclination to perform certain actions, which tend to their well-being and preſervation. To the performance of theſe actions they are particularly prompted by their preſent ſenſations, by imagination ſupplying the place of memory, and other cauſes. The wonderful effects produced by theſe inſtinctive appetites are further to be attributed to the exquiſite conſtruction in their bodily conformation, particularly in the ſtructure of the various organs with which they execute their operations, and to the ſuperior perfection and acuteneſs of their external ſenſes, by which they are quickly and diſtinctly informed of thoſe qualities of objects which moſt materially concern them. By this inſtinct, each tribe of inſects have a ſtrong propenſity to refuſe individually, and with their whole united power, whatever in food or climate tends to ſhorten their lives, or ſlacken their natural progreſs.

Again, every inſect has its proper plant, or tribe of plants, which it naturally requires for its

its nouriſhment, and on which it generally lays its eggs, and that on the moſt concealed parts of the plant; and the plant, and inſect which attacks it, are always natives of the ſame climate, and therefore endure the ſame degrees of heat and cold.

In hopes to be enabled at ſome future opportunity to diſcuſs and inveſtigate theſe matters, I ſhall for the preſent forbear to make any more obſervations on the ſubject: But from the few which I have made, may be drawn the following concluſion, *viz.* That, when certain plants are infeſted and attacked by their natural tribe of inſects, it is an exceedingly nice point and curious operation to exterminate them, without injuring the plants, or ſtopping them their natural growth.

SUNDAY, April 27, 1794, was perhaps the warmeſt day ever remembered at that time of the year in this part of the country; for at noon the mercury in Fahrenheit's thermometer, in the ſhade, ſtood at 77 degrees, and the day throughout was proportionably warm.

PREFACE.

I AM not the firſt who has written on the culture of the Cucumber, nor am I the firſt who has pretended to cauſe that vegetable to produce fruit in every month of the year *; but I have not known, or heard, of any gardener except myſelf that has ſo much as pretended to make it appear that he could produce cucumbers in every month of the year from the ſame plants.

I do not ſay, nor think, that I am poſſeſſed of more dexterity, nor even of ſo much, in the management of the cucumber on a dung-bed, as ſome are; but I have invented a bed on which I am confident that I can produce cucumbers with more certainty, leſs expenſe †, and much

* Some have been at the pains and expenſe to have ripe fruit in every month of the year, which is rather a curioſity than any real advantage. Millar's Dict. abridged. See Cucumis.

† Beſides the ſaving in the dung and labour, the frames laſt longer on a brick bed than on a dung bed; becauſe on the bricks they ſtand dry and ſteady.

leſs laborious work to myſelf than any other perſon can do on a bed made of dung. It may not, therefore, be improper to give an account of the means which led me to this invention, and which I ſhall do as briefly as I can.

Before I came to live in this place, I had no experience of beginning to grow cucumbers earlier than about Chriſtmas; but when I came to live in this neighbourhood, I was informed that ſeveral of the neighbouring gardeners began every year to ſow their ſeeds preciſely on the 20th day of October, and that they generally cut fruit in January or February following.

It was in the month of January 1785 that I came to live here, and I found nine lights of tolerably good cucumber plants, from which I cut fruit ſome time in the month of March; but not long after that they became infected with the mildew *, which brought them gradually to an untimely end: And the ſame year I had little or no better ſucceſs with thoſe under hand and bell glaſſes. Thus the firſt year of my ſervitude in this place paſſed over with no ſmall anxiety on my ſide; becauſe I failed in having that vegetable either good or in plenty, which was required in the family.

* I was informed that the cucumber and melon plants in this garden had for many years been ſubject to the mildew.

In

In the month of October 1785 I ſowed the ſeeds of the cucumber, from which I raiſed very good plants; and as I was allowed plenty of dung, and had horſes and carts at my command to bring it, and labourers enough to work and prepare it, I thought I might come to do as well as my neighbour; but before the month of March I found I was miſtaken, and during the year 1786 I had but little or no better ſucceſs than in the preceding: My anxiety, therefore, was in no degree leſſened, but on ſeveral accounts rather increaſed *.

The cauſe of my failure I attributed to the mildew and canker; I therefore ſtudied to find out what was the cauſe of thoſe diſeaſes, in order that I might endeavour to diſcover a remedy for their cure; and, in proceſs of time, I was fortunate enough not only to find out from what cauſes they proceeded, and a method of cure, but, what is ſtill a better method, to prevent the plants from being infected. Yet, notwithſtanding my having acquired the poſſeſſion of theſe attainments, I was ſtill at a loſs

* None but thoſe who ſenſibly experience it, know the anxiety of mind felt by a ſervant calumniated, and in danger of loſing both his place and character; and to have the proſpect of being deprived of the ordinary means of ſubſiſtence, either through malice, prejudice, or oppreſſion, needs more than common ſtrength of mind to bear with patience.

how to produce cucumbers ſo early as a near neighbour, or ſo early as they were required in the family; for although I could, with much labour and great attention, preſerve the plants alive through the winter, yet when the ſpring came, they were ſo weak and feeble that they were not able to produce fruit early, or in any quantity.

I was adviſed to apply for help to my neighbour, who, I was informed, had ſome ſecret method of promoting vegetation in winter, and which, as is ſaid, was firſt found out and practiſed about Southgate, and that no perſon was to be let into this ſecret without paying a certain ſum of money. The paying a little money for ſuch a clever thing I had no objection to; but I was rather loth to have it ſaid that I ſhould be taught by one who, it might be expected, I ought to be capable of teaching: This, however, was only a piece of pride, over which, on due conſideration, I for once obtained a victory. Accordingly I made application to my neighbour and brother-gardener, who readily conſented to diſcloſe to me the ſecret on condition that I ſhould pay him five guineas; and ſo a bargain was made with ſeeming good will on both ſides.

The

The principal thing which I was taught for my five guineas was to keep down the burning heat of the dung about the roots of the plants by pouring water into the bed. This I confeſs was what I had not been ſo well verſed or inſtructed in before; it therefore proved ſerviceable to me.

However, although I was well pleaſed with my inſtructor, becauſe I thought he kept back no part of his knowledge from me, yet I was by no means ſatisfied with the ſecret, as it was termed; for although it was what I was not well ſkilled in before, yet the laborious work, continual attention, and great expenſe, were, in no degree, curtailed or leſſened, and ſucceſs in keeping the plants in a growing ſtate during the winter was ſtill very precarious: And, indeed, no wonder; for I believe it would be an overmatch for the ingenuity of the greateſt of our modern artiſans, philoſophers, or naturaliſts, to find out methods, and give proper directions, for rendering and keeping the air in the frames of a dung-bed ſweet, and to put and keep in motion that degree of vegetative power which is neceſſary for the growth of a cucumber plant during the winter months, when that grand luminary, the ſun, which is one of the principal cauſes of vegetation, is by the Maker of all or-

dered for a time to withdraw ſome part of his fructifying heat from the regions in which we live.

Having taken theſe matters into mature conſideration, I reaſoned with myſelf in the following manner;

That the cucumber plant muſt grow naturally, and without artificial heat, ſomewhere.

That it does not appear to me that there is any internal heat in the earth which effects the vegetation of a cucumber plant in its natural climate, but what is raiſed by the heat of the ſun; and that, therefore, if the air in the frames could, by any means, be kept up to a proper degree of heat, there would be no occaſion for heat underneath the mould in which the plants grow.

That in the common method of cultivating the cucumber plant in the winter and early in the ſpring, the great difficulty ariſes from the want of heated ſweet air, and that in trying to get the air in the frames properly warmed, the roots of the plants are often injured; and as it is the roots which carry the nouriſhment to the plant, if the roots are deſtroyed or hurt, the plant, of courſe, muſt languiſh till it has made freſh roots again.

Theſe and ſuch-like conſiderations induced me to make trial of ſeveral experiments, among which were the following:

Of rotten dung I made a ridge or bed two feet broad, thirty inches high, and as long as the frames which were intended to be ſet upon it. On each ſide of this ridge I made up a lining of good warm dung, raiſing it higher than the ridge of rotten dung on account of its ſinking; after that the frames and lights were ſet upon it, and managed in all other reſpects as a common dung-bed.

Another experiment which I made trial of was upon an old well-ſettled dung cucumber bed, in which I made holes here and there to enable the heat of the linings to warm the air in the frames.

A third experiment which I tried was with green turfs, which I had cut handſomely, and with them I built up the ſides of the bed cleverly, leaving and making vacuities for the circulation of the ſteam of the linings among the turfs and underneath the mould in the frames. Theſe three methods anſwered pretty well, but they were only the prelude or leading to a better and more durable plan; for I thought of having a bed built of bricks; and, to be ſhort, I ſchemed out a plan, and got it executed.

In the firſt brick bed which I had built, a flue was carried length-wiſe in the middle of each frame, and the hills of mould for the plants to grow in were made upon this flue; but I was obliged to alter it, becauſe I found the heat, introduced through means thereof, too powerful for the roots of the plants.

Alſo in the firſt bed I had ſix leaden pipes fixed in the frames, one end in the coverings of the flues, and which communicated with the ſteam of the linings, and the other end going through the north ſide of the frames, projecting about a foot beyond them: Theſe pipes were intended to draw the heat out of the flues occaſionally. Alſo in each three-light frame in the coverings of the flues I had round holes made here and there, and wooden plugs or ſtoppers fitted for them exactly. Theſe holes or apertures were to admit the ſteam of the linings when ſweet to enter the frames among the plants; but theſe, as well as the pipes, I found by experience to be uſeleſs, and even in ſome reſpects rather hurtful: They are therefore juſtly exploded, which renders a deſcription of their operations at this time altogether unneceſſary.

In the firſt bed too the four-inch thick ſolid walls between each three-light bed were carried

up

up full of apertures exactly the ſame as the ſides of the bed: But theſe did not anſwer; becauſe in windy weather there was no check to the ſteam of the flues, and therefore one end of the frames was at times rendered too cold, and the other too warm.

In treating of the culture of the cucumber, I have, in the firſt place, taken notice of thoſe parts of the globe in which I apprehend it naturally grows, and in particular that part of the world in which that vegetable was cultivated, and held in eſtimation by the ancients; and it appears from the lateſt accounts we have, that the inhabitants of that country (Egypt) ſtill continue to cultivate it in abundance, and even make its fruit, while in ſeaſon, a part of their daily ſubſiſtence.

Secondly, I have given directions in what ſituation the bed ſhould ſtand, and how it ought to be ſheltered and protected from the high winds and inclemency of the weather, and have pointed out what ſort of ſoil I think is the beſt for the culture of the plant, as alſo the ſort of ſoil I uſe myſelf, the materials it is made of, and the method of making it: I have ſhown that the heat of this climate is too little for the production of the cucumber, and have made ſome obſervations on the nature and degree of heat it requires.

Thirdly,

Thirdly, I have ſaid ſomething about the quantity and quality of water requiſite for its nouriſhment, and have exhibited the ill conſequences ariſing from giving too much or too little, and I have mentioned what degree of heat and temperature the water ſhould be of when it is moſt proper for the nouriſhment and growth of the plants.

Fourthly, I have pointed out the neceſſity of ſupplying the plants at all times with freſh ſweet air, and have ſhown the bad conſequences reſulting from their being ſupplied with contaminated or impure air; and I have given directions how to prevent unhealthy air from getting into the frames among the plants, as well as how to prevent impure air from being generated in the frames.

Fifthly, I have mentioned the method I take in making and managing the linings, ſo that the air in the frames may be kept up to a proper degree of heat, and ſufficiently ſupplied with vegetative moiſture: I have ſet forth the neceſſity of covering up the frames at nights, and recommended that particular attention ſhould be paid thereto, and have laid down my method of covering and of uncovering.

Sixthly, I have deſcribed my method of ſtopping the plants, and of keeping them regularly thin

thin both in their ſhoots and in their leaves; ſo that their nutritive juices may not be unneceſſarily waſted in feeding ſuperfluous branches and leaves.

Seventhly, I have taken notice that the cucumber plant bears male and female flowers; it therefore differs from the greateſt number of plants, whoſe flowers are hermaphrodite, that is, they contain within them the characters of both ſexes *, or the male and female organs of generation

* The ſexual ſyſtem is ſuggeſted and confirmed by the analogy obſervable between the eggs of animals and ſeeds of plants, both ſerving equally to the ſame end, that is, that of propagating a ſimilar race; and, by the remarks which have been made, that when the ſeed of the female plant is not impregnated with the prolific powder of the male, it bears no fruit, inſomuch that as often as the communication between the ſexual parts of plants has been intercepted, which is the cauſe of their fecundity, they have always proved barren. The authors of this ſyſtem, after exactly anatomizing all the parts of the plant, aſſign to each a name, founded on its uſe and analogy to the parts of an animal. Thus as to the male organs, the filaments are the ſpermatic veſſels, the anthera the teſticles, and the duſt of the anthera correſponds to the ſperm and ſeminal animalcules; and as to the female, the ſtigma is the internal part of the female organ which receives the duſt, the ſtyle anſwers to the vagina, the germ to the ovary, and the pericarpium, or fecundated ovary, to the womb.

The ſexual ſyſtem was not wholly unknown to the ancients, though their knowledge of it was very imperfect. Accordingly we find in the account by Herodotus of the country about Babylon where palm-trees abounded, that it was a cuſtom with the natives in their culture of theſe plants to aſſiſt the operations of nature by gath ering

ration are in the ſame flower. The flowers of the cucumber plant being not of the hermaphrodite

gathering the flowers of the male trees, and carrying them to the female. By this means they ſecured the ripening of the fruit, which might elſe, on account of unfavourable ſeaſons, or the want of proper intermixture of the trees of each ſex, have been precarious, or, at leaſt, not to have been expected in equal quantities.

The ancients had alſo ſimilar notions concerning the fig. Theophraſtus obſerves, that the characteriſtic and univerſal difference among trees is that of their gender, whether male or female. Ariſtotle ſays, that we ought not to fancy that the intermingling of ſexes in plants is the ſame as among animals; however, there ſeems to have been a difference of opinion among the ancients as to the manner in which plants ſhould be allowed to have a difference of ſex. Some apprehended that the two ſexes exiſted ſeparately, and others thought that they were united. Empedocles ſays that plants were androgynous or hermaphroditical, or that they were a compoſition of both ſexes. Ariſtotle expreſſes his doubt upon this head. Empedocles called plants oviparous; for the ſeed, or egg, according to his account, is the fruit of the generative faculty, one part of which ſerves to form the plant, and the other to nouriſh the germ and root; and in animals of different ſexes we ſee that nature, when they would procreate, impels them to unite, and, like plants, to become one, that, from this combination of two, there may ſpring up another animal.

As to the manner in which fruits were impregnated, the ancients were not ignorant that it was by means of the prolific duſt contained in the flowers of the male; and they remarked that the fruits of trees never came to maturity till they had been cheriſhed with that duſt. Upon this ſubject Ariſtotle ſays, that if one ſhakes the duſt of a branch of a male palm-tree over the female, the fruit will ripen quickly, and when the wind ſheds this duſt of the male upon the female, it ripens apace, juſt as if a branch of the male had been ſuſpended over the female. And Theophraſtus obſerves, that they bring the male

dite kind, it is neceſſary, for the rendering it prolific, that the male flowers, or ſome quality belong-

male to the female palm, in order to make her produce fruit. The manner in which they proceed, ſays he, is this: When the male is in flower, they ſelect a branch abounding with that downy duſt which reſides in the flower, and ſhake this over the fruit of the female; this operation prevents the fruit from becoming abortive, and brings it ſoon to perfect maturity. Pliny alſo informs us that naturaliſts admit the diſtinction of ſex not only in trees, but in herbs and in all plants, yet this is no-where more obſervable, he adds, than in palms, the females of which never propagate but when they are fecundated by the duſt of the male. He calls the female palms, deprived of male aſſiſtance, barren widows; he compares the conjunction of theſe plants to that of animals, and ſays, that to generate fruit the female needs only the aſperſion of the duſt or down of the flower of the male.

Zaluzianſcki ſeems to have been the firſt among the moderns who clearly diſtinguiſhed from one another the male, the female, and the hermaphrodite, plants. About one hundred years after him Sir Thomas Millington and Dr. Grew communicated to the Royal Society their obſervations on the impregnating duſt of the ſtamina.

Camerarius, towards the end of the laſt century, obſerved, upon plucking off the ſtamina of ſome male plants, the buds that ought to have produced came not to maturity. Malpeghi, Geoffry, and Vaillant, have all carefully conſidered the fecundating duſt, the latter of whom ſeems to have been the firſt eye-witneſs of this ſecret of nature, the admirable operation that paſſes in the flowers of plants between the organs of different ſexes. Many authors afterward applied themſelves to improve this ſyſtem, the principal of whom were Morland, Logan, Van Royen, Bradley, Gotliel, Ludwigius, Blair, Wolfius, Verdrees, and Monro; but Linneus had the honour of completing this ſyſtem by reducing all trees and plants to particular claſſes, diſtinguiſhed by the number of their ſtamina or male organs.

belonging to them, ſhould co-operate with the female flowers; therefore I have pointed out the moſt judicious method of performing that operation.

Eighthly, I have mentioned what way the flues and brick-work of the bed are to be ſecured, ſo that the ſteam of the linings may not pe-

The ſexual hypotheſis, on its firſt appearance, was received with all that caution which becomes an enlightened age, and nature was traced experimentally through all her variations before it was univerſally aſſented to. Tournefort refuſed to give it a place in his ſyſtem, and Pontedera, though he had carefully examined it, treated it as chimerical. The learned Dr. Alſton, profeſſor of botany in the univerſity of Edinburgh, violently oppoſed it; but the proofs which Linneus has given amongſt the aphoriſms of his Fundamenta Botanica, and further illuſtrated in his Philoſophia Botanica, are ſo clear, that the mind does not heſitate a moment in pronouncing animal and vegetable conception to be the ſame, but with this difference, that in animals fruition is voluntary, but in vegetables neceſſary and mechanical. The impregnation of the female palm by the farina of the male, related by M. Mylius, in his letter to Dr. Watſon, eſtabliſhes the fact atteſted by the ancients concerning the palm-tree; and as to the fructification in other vegetables (though it may differ in particular circumſtances, it has nevertheleſs a conformity to that of the palm-tree with reſpect to the parts ſuppoſed to be the organs of generation, which are diſcoverable either on the ſame or in a ſeparate flower), we may, from this ſingle experiment, deduce an argument by analogy for the confirmation of the whole ſexual hypotheſis.

Beſides, a very ſtriking proof of the analogy between plants and animals may be drawn from obſervations made in their infant ſtates, at which early period they ſeem nouriſhed and protected in a ſimilar manner.

netrate

netrate through them into the frames; and I have given directions in what manner the pits are to be filled up firſt with ſtones, broken bricks, or chalk, to drain the wet from the mould, and then with mould for the plants to grow in.

Ninthly, I have given a ſhort account of the method generally practiſed in the cultivation of early cucumbers on a dung-bed, and have taken notice of ſome of the difficulties and inconveniencies accompanying that mode of management, and which now may be exploded; becauſe a better method is found out, and put in practice, and which is on a brick-bed ſimple in its conſtruction, free and eaſy in its management: The preferableneſs of this new method over that of the old I have endeavoured to demonſtrate.

Tenthly, I have given the method which I follow, and which I believe is generally practiſed in the cultivation of cucumbers in ſummer in the open air trained from under hand or bell glaſſes.

Laſtly, I have made a few obſervations on the management held forth in the annexed journal, I have pointed out the errors which I fell into during the courſe of one year's management, and have concluded with mentioning the medium degree of heat which I wiſh to keep in the cucumber frames during the winter and ſpring months.

Upon

Upon the whole, I am in hopes that this effort of mine to render the cultivation of early cucumbers more intelligible, more eaſy, and more certain, will not prove ineffectual, but be acceptable and uſeful to many whoſe buſineſs it is actually to perform the practical part; and I am alſo not without ſome hopes of its being acceptable, at leaſt in ſome degree, even to thoſe whoſe buſineſs is not actually to cultivate, but who admire and encourage the bringing to perfection ſuch fruits and vegetables as are generally thought worthy of being brought forward by means of artificial heat and moiſture, and which, on account of the expenſe attending the mode of their cultivation, and the ſkill and attention required in their management, have, are, and ever will be, accounted rarities.

ADDISCOMBE PLACE,
May 1, 1794.

INTRODUCTION.

FOR the ſake of perſpicuity, and that no perſon may be at a loſs to know my mode of management, I have ſubjoined a diary or journal, which contains an accurate account of the degrees of heat which I kept in the cucumber frames, during one year; and of every thing done, or thought neceſſary to be done, in the cultivation of the cucumber.

I have kept a journal for ſome years; and in the medium heat which I kept in the frames during that time, there is but little difference. I do not take upon myſelf to aſſert, that my mode of management with regard to heat, water, earth, and air, is the beſt that can be; but this I can with truth ſay, that with the degree of heat I keep, and the other co-operating elements, the plants continue throughout the ſeaſon to produce plentiful crops of good, well-flavoured fruit.

If any perſon ſhall think that the degree of heat which I keep is too great, it is an eaſy matter for him to keep leſs; and if any perſon at any time want more heat, it is eaſily increaſed, either by larger coverings, leſs air, or more heat in the linings.

My method of keeping the ſame plants in bearing for ſuch a length of time, is not a matter of mere curioſity, but of real advantage, to thoſe who wiſh to be conſtantly ſupplied with that vegetable. However, were the plants to be deſtroyed in the months of July or Auguſt, and young plants in readineſs beforehand to ſubſtitute in their place; ſuch a mode of management, for any thing I know, might be more productive, than that of continuing on the ſame plants: But this I only give as theory. Unleſs it be for curioſity, I do not think that it is worth any gentleman's while, to try to have cucumbers for more than eight or nine months in the year; nor is it perhaps one year in three, that they will ſucceed, in the months of November, December, January, and to the middle of February.

I have frequently ſown the ſeeds of cucumbers in the month of Auguſt, and have planted them in boxes of mould, placed on the back flues of the hothouſe, not far from the glaſs, and have ſometimes cut fruit from them till about Chriſtmas.

In warm parts of the country, the glaſſes and frames may be taken off the plants of the brick bed, towards the latter end of June; and, if the ſummer prove fine, the plants will bear for at leaſt two months: But to make ſure of a conſtant ſupply of good clear fruit, I think it beſt to keep on the glaſſes all the ſummer.

Some gardeners take great pains in ſhading their plants, on days of hot ſunſhine; this method I by no means condemn, but I ſeldom practiſe it.

When

When I cultivated the cucumber on beds made of dung, early in the ſpring I was frequently obliged to ſhade the plants from the rays of the ſun, to prevent their leaves from flagging; but ſhading the plants ſo early, is a great hindrance to them.

When the cucumber plant cannot ſtand the ſun, but droops its leaves when his rays dart themſelves upon it, the plant is not in a good ſtate of health, or elſe air has been let in to the frames too ſuddenly, or in too great a quantity, or it wants water: If a cucumber plant be in a good ſtate of health, the rays of the ſun may ſcorch its leaves, but they will not cauſe the plant to flag; for the greater heat his rays dart upon it, the more upright will its leaves ſtand; for much heat makes the juices flow rapidly, and thereby the veſſels of the plant, being filled with the vegetative juices, are diſtended, and the erection of the leaves of the plant greatly promoted.

It is not abſolutely neceſſary to uſe thermometers in the cucumber frames: I myſelf, and many others, can manage the bed and frames very well without them, eſpecially without one plunged in the mould. It may then be ſaid, why do I uſe them? I anſwer, firſt for my own pleaſure and ſatisfaction; and ſecondly, in order that I might the better give to every one who chuſes to read, an opportunity of being able to approve or diſapprove of my mode of management: And whether, in general opinion, the ſcale turn to approbation or diſapprobation, yet the ſame cauſe will always produce the ſame effect; and, therefore, if any perſon chuſes to keep the heat of

his frames to nearly the ſame degree as I do, together with a ſufficiency of air and moiſture, he may rely upon being ſucceſsful.

I do not mean, that the heat ſhould be kept to the very ſame degree, on every identical day of every year; for that would be impoſſible, unleſs every day in every year were to be of the ſame degree of heat: But as that is not in natural vegetation, neither can it be in artificial vegetation; for forcing vegetation is only aſſiſting the climate, where the climate falls ſhort in its productions.

The following regiſter for one day, of the temperature of the open air, and of that of the cucumber frame, may ſerve to illuſtrate the foregoing paragraph.

Tueſday, February 21ſt, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.
7	—	—	7	S. W. Clear, and a briſk air of
8	72	78	10	S. W. Ditto. [wind.
9	71	78	13	S. W. Bright ſunſhine.
10	72	78	18	S. W. Ditto.
11	78	78	21	W. Ditto.
12	80	78	23	W. Ditto.
2	85	79	25	W. Ditto.
4	80	80	23	W. Ditto.
8	—	—	16	W. Clear, and nearly calm.
10	—	—	17	W. Ditto.

If the regiſter of this day be compared with that of the ſame day of the ſame month of the ſucceeding year, 1793, a difference in the degrees of heat will be ſeen; and ſo it will happen, in a leſs or greater degree,

degree, in every ſucceeding year, month, or day. But it may be obſerved, that the diſproportion is in general greater in the open air, than in that of the cucumber frames, eſpecially in the winter and ſpring months.

In my journal I have given the degrees of heat, according to the thermometer, in the open air in the ſhade, at different hours of each day, for twelve months. The thermometer hung on a nail, which was driven into a brick wall, having a north aſpect, and the ſouth ſide of it covered from the direct rays of the ſun by a thicket of ſhrubs. The ground at this place lies on a declivity to the north, about one mile northward of Addington hills, which are barren of every vegetable, except heath of different ſorts. Snow lies here for a ſhort time after it is melted in the adjacent country; and the garden crops are later, by eight or ten days, than they are in ſome parts, only about four or five miles diſtant: This, I apprehend, is occaſioned by the nature of the ſoil, which is various, even in the ſame field; ſome being a ſandy loam, ſome a cold clay, and ſome gravelly, and underneath in ſome parts is ſtrong clay, in other parts ſand and gravel, and ſome parts are ſpringy. In this part of the country, it is but ſeldom that the thermometer falls below 20, or riſes above 80: It would, therefore, ſeem that the medium heat is about 50.

I have often tried the heat of the ſprings in this part of the country, and I never found them make the mercury in the thermometer fall below 44, nor

raiſe it above 56. The medium heat of the water of the ſprings, therefore, ſeems to be the ſame as the medium heat of the open air: But the water of the ſprings is much leſs liable to change than the air is, inaſmuch as the cauſe of the changes in both, cannot operate with the ſame freedom on the one, as it does on the other.

The greateſt degree of cold I ever obſerved, was on Tueſday, the 21ſt of February 1792: At ſeven o'clock in the morning of that day, the mercury ſtood at 7, and it roſe no higher that day than 25, although the ſun ſhone bright all day. And the hotteſt day I ever took notice of, was Sunday the 7th of July 1793, a regiſter of which is to be ſeen in my journal.

It appears, from a regiſter of the thermometer kept at London by Dr. Heberden, for nine years (that is, from the end of 1763 to the end of 1772), that the mean heat, at eight in the morning, was 47; and by another regiſter, kept at Hawkhill, near Edinburgh, that the mean heat in that place, during the ſame period of time, was 46. By regiſters kept in London, and at Hawkhill, for the years 1772, 1773, 1774, it appears that the mean heat of theſe three years in London, at eight in the morning, was 48; and at two in the afternoon, 56: And the mean heat of three years, both morning and afternoon, 52. And the mean heat at Hawkhill, for the ſame time, at eight o'clock in the morning, was 45; and at two in the afternoon, 50: And the mean heat for the morning and afternoon, for the whole time, 47. The mean heat

heat of ſprings near Edinburgh, ſeems to be 47; and London, 51. Phil. Tranſ. vol. lxv. From the Meteorological Journals of the Royal Society, publiſhed in the Philoſophical Tranſactions, it appears that the mean heights of the thermometer, kept without and within the houſe, are as below:

	Ther. without	Ther. within
For 1775	51 5	52 7
1776	51 1	52 9
1777	51 0	53 0
1778	52 0	53 1

And, therefore, according to theſe obſervations, the mean heat of four years, eſtimated by the external thermometer, is 51. The leaſt height, during this period, was on the 31ſt of January 1776, at eight o'clock in the morning, when it was 13: And the greateſt height, which was on the 13th and 14th of July 1778, at two in the afternoon, was 86.

It is well known that heat, in all bodies, has a tendency to diffuſe itſelf equally through every part of them, till they become of the ſame temperature: Again, bodies of a large maſs are both cooled and heated ſlowly. Beſides the maſs of matter, there are two other conſiderations of much importance, in the ſlow or quick tranſmiſſion of heat through bodies: Theſe are, their different conducting powers, and their being in a ſtate of ſolidity or fluidity. The conducting powers of heat are well known to be very various in different bodies; nor are they hitherto reducible to any law, depending either upon the denſity or chemical properties of matter.

Metals of all kinds are good conductors of heat; while glaſs, in a heavy, ſolid, homogeneous body, is an extremely bad conductor, even when a metallic calx enters largely into its compoſition, as in flint glaſs.

A ſtate of fluidity greatly promotes the diffuſion of heat; for a body in a fluid ſtate, by the particles readily moving among each other, from their different denſities or other cauſes, mixes the cold and warm parts together, which occaſions a quick communication of the heat. To apply theſe obſervations to the preſent ſubject: The ſurface of the earth being expoſed to the great heats of ſummer, and the colds of winter; or, more properly, the low degree of heat in winter; will receive a larger proportion of heat in the former ſeaſon, and a ſmaller in the latter: And being, further, of a large maſs, and of a porous and ſpungy ſubſtance; and, therefore, not quickly ſenſible to ſmall variations of heat; it will become of a mean temperature at a certain depth between the heat of ſummer and cold of winter, provided it contain no internal ſource of heat within itſelf.

Water, though in a larger maſs, follows in ſome degree the heat and cold of our ſummer and winter, from the fluidity of its parts occaſioning a more ſpeedy effuſion of heat.

Air is quickly ſuſceptible of heat; and from the expanſions produced in it, and conſequent motions in the whole maſs, the temperature is rendered ſoon uniform. The changes in the heat of the air are what we have meaſured; and we are to be underſtood

ſtood to ſpeak of them, when we talk of the temperature of ſummer and winter. It may be aſked then, Is the heat of the ſun firſt communicated to the air, and thereby to the earth? No: The air is ſuſceptible of a very ſmall degree of heat, from the rays of the ſun paſſing through it; for it is well known they produce no heat in a tranſparent medium, and conſequently, that the air is only ſo far heated as it differs from a medium that is perfectly tranſparent.

The heat produced by the rays of the ſun, bear a proportion to their number, their duration, and their falling more or leſs perpendicularly; and it takes place at the points where they ſtrike an opaque and non-reflecting ſurface.

The ſurface of the earth may, therefore, be conſidered as the place from whence the heat proceeds, which is communicated to the air above, and the earth below. That this is really the caſe, is evident, from the ſuperior degree of heat produced by the action of the ſun upon an opaque body, which will often be heated to 150 (Fahrenheit), while the temperature of the air is not above 90. It may ſeem, therefore, that, to meaſure the heat communicated to the earth, it ſhould be done at the ſurface, where the action of the rays immediately takes place.

But though the heat be produced at the ſurface, it is communicated freely to the air as well as to the earth, from the rays of light acting for a longer time upon the ſame parts of matter: Yet there is little doubt that much the greater part is carried off, which as it is heated flies off, and allows a freſh portion

portion of cold air to come in contact with the heated ſurface.

But ſtill it is immaterial, whether the heat of the ſun be excited more in the earth, than in the air; for whichever has the largeſt portion, will in the end communicate a part to the other, and ſo reſtore the balance. The ſame obſervation applies to ſuch cauſes of cold as may operate at the ſurface of the earth; as evaporation, and that taken notice of by Mr. Wilſon. The air, therefore, near the ſurface of the earth, will ſhow by a thermometer in the ſhade, nearly, if not exactly, the ſame degrees of heat that the ſun communicates to our terreſtrial globe: And if a mean of the heats thus ſhown, be taken for the year round, and we penetrate into the earth to that depth that is no longer affected either by the daily, monthly, or annual variation of the heat; the temperature at ſuch a depth ſhould be equal to the annual mean above mentioned.

To aſcertain this with the utmoſt preciſion, it muſt be obvious that numerous obſervations ſhould be made every day, correſponding to the frequent changes of temperature, which are known to happen in the twenty-four hours in all climates; and upon theſe a daily mean ſhould be taken, and the annual mean deduced therefrom. This has not yet been done: But when we have obſervations, from which a mean temperature can be deduced with any degree of certainty, it will be found not to differ greatly from the heat of deep caves or wells in the ſame climate.

If

If further experience and obſervation ſhould confirm the above opinions, it will be attended with this advantage, that we ſhall be poſſeſſed of a ready method of aſcertaining the mean temperature of any climate; which, with a few obſervations of the extremes of heat and cold at particular ſeaſons, will teach us as much of the country, with regard to heat and cold, as the meteorological obſervations of ſeveral years.

For obtaining the temperature of the earth, the beſt obſervations are probably to be collected from wells of conſiderable depth, and in which there is not much water. Springs iſſuing from the earth, although indicating the temperature of the ground from whence they proceed, are not ſo much to be depended upon as wells; for the courſe of the ſpring may be derived from high ground in the neighbourhood, and it will thence be colder: And it may run ſo near the ſurface, as to be liable to variations of heat and cold, from ſummer and winter; or it may be expoſed to local cauſes of heat in the bowels of the earth.

Wells ſeem alſo better than deep caverns; for the apertures to ſuch are often large, and may admit enough of the external air to occaſion ſome change in their temperature. Wells are, however, not to be met with in all places; and in that caſe, we muſt remain ſatisfied with the ſprings.

The following obſervations were made in the iſland of Jamaica, where there are flat lands in many parts towards the coaſt, but all the interior part of the country

country is mountainous: The heat is greateſt in the low lands, and decreaſes as you aſcend the mountains. The town of Kingſton * is ſupplied with water from wells; the ground on which it ſtands riſes with a gentle aſcent, as you recede from the ſea. In the low parts of the town, the wells are but a few feet deep, and many of them brackiſh: The heat of the water in ſome of them is found to be as high as 82; but they are evidently ſo near the ſurface, as to be affected by the heat of the ſeaſons. As you aſcend, the wells are deeper; and the temperature is nearly 80 in all of them: What variations there are, come within one degree; that is, half a degree leſs than 80, or half a degree more. They are of different depths, and ſome not leſs than 100 feet; though if they are of half that depth, the temperature is nearly uniform.

Near Rock Fort is a ſpring, immediately at the foot of the long mountain; of which, though not a great body of water, the heat is 79. All the places mentioned, are but little above the level of the ſea; probably not more than the depth of the wells, at the reſpective places.

The temperature of the air at Kingſton admits but of ſmall variations: The thermometer, at the hotteſt time of the day, and during the hotteſt ſeaſon of the year, ranges from 85 to 90. In the ſevereſt ſeaſon, and obſerved about ſun-riſing, which is the coldeſt time in the twenty-four hours, it ranges from 70 to 77: It has been ſeen as low as 69,

* Kingſton lies in latitude 17° 50′ north, and in longitude 76° 32′ weſt.

and ſometimes as high as 91. The annual mean temperature cannot, therefore, either much exceed or fall much ſhort of 80, as indicated by the wells. *Philoſ. Tranſ.*

That heat and cold very much depend on the clearneſs or darkneſs of the ſky, is atteſted by fact; for the winter cold in South America is very ſharp, becauſe the atmoſphere is loaded with clouds and icy particles, which intercept the rays of the ſun. At Lima, in latitude 12° ſouth, where the ſky is never free from vapours, the heat is moderate; but at the diſtance of a few miles, the ſky is more ſerene, and there the heat is greater: And at Carthagena, in latitude 11° north, the heat on this account is intolerable.

The different degrees of heat and cold in different places, depend, in a very great meaſure, upon the accidents of ſituation, with regard to mountains or valleys, rivers, ſeas, and wood, and the nature of the ſoil. Mountains, eſpecially when they are lofty and covered with ſnow, greatly help to chill the air, by the winds which come over them, and which blow in eddies through the levels beyond.

Mountains ſometimes turning a concave ſide towards the ſun, have the effect of a burning mirror, on the ſubject plain; and the like effect may ſometimes be had from the concave or convex parts of clouds, either by refraction or reflection: And ſome even take theſe to be ſufficient to kindle the exhalations lodged in the air, and produce thunder and lightning.

As

As to ſoils: A ſtoney, chalky, or ſandy earth, it is known, reflects moſt of the rays into the air again, and retains but few, by which means a conſiderable acceſſion of heat is derived to the air; as, on the contrary, black, looſe, and ſwampy ſoils, abſorb moſt of his rays, and return few into the air.

It is certain, that heat, communicated by the ſun to bodies on this earth, depends much upon other circumſtances, beſides the direct force of his rays; theſe muſt be modified by our atmoſphere, and variouſly reflected and combined by the action of the ſurface of the earth itſelf, to produce any remarkable effects of heat: So that, if it were not for theſe additional circumſtances, it is much to be queſtioned, whether the naked heat of the ſun would be very ſenſible.

To this purpoſe it is obſerved by Ulloa, in his Voyage to Peru, that on the weſtern ſhore of that country, from Santa Maria de la Purilla to Lima, it is winter on the mountains from January or February to June, whilſt it is ſummer in the vallies; but from June to November or December, it is winter in the vallies, and ſummer in the mountains.

It is found, by the ſcience of aſtronomy, that the ſun is farther from the earth in ſummer, than in winter; but as the eccentricity of the earth's orbit bears no greater proportion to the earth's mean diſtance from the ſun, than 17 do to 1000, this ſmall difference of diſtance cannot occaſion any great difference of heat or cold. But the principal cauſe of the difference between the heat of ſummer and that

that of winter is, that in ſummer the rays of the ſun fall more perpendicularly, and paſs through a leſs denſe or leſs thick part of the atmoſphere; and, therefore, fall with greater force and in greater number on the ſame place: And beſides, by their long continuance, a much greater degree of heat is imparted by day, than flies off by night.

" A regiment, which had been abroad at Carthagena and Jamaica, was afterwards ordered into the Highlands of Scotland; and on one day in particular, as they were on their march in the Highlands, it was agreed by the officers and all the men, that they had never felt the heat ſo intolerable in the Weſt Indies *."

Sudden changes from heat to cold, and from cold to heat, make either feel greater than they really are: In ſummer, if you put your hand into a good ſpring or well, you cannot with eaſe hold it long, on account of cold; and in the winter, the ſame ſpring feels warm, although the water of it be of the ſame degree of heat as it was in ſummer. Again, if in ſummer you go into a cellar under ground, the air feels cold; but if you go into it in the winter, the air feels warm, although its heat be nearly the ſame at both times: And in winter, when the open air is about freezing, if you go into a hot-houſe of about 65 or 70 degrees of heat, it feels very warm. Hence we may infer, that perhaps though the regiment thought the heat of the Highlands in Scotland more intolerable than that of Carthagena; yet, in fact, the heat of the High-

* Jones's Phyſiological Diſquiſitions, p. 167.

lands

lands might not be so great as that of Carthagena. To my certain knowledge, the weather in some parts of the Highlands of Scotland is very cold: The nights are frequently frosty in the middle of summer. When I was a boy, I remember the ground to have been covered with a deep snow for thirteen weeks; I think it was about the year 1769. In the year 1791, at Croydon, which is ten miles south of London, in the month of June there were several frosty nights.

In Pensylvania, in latitude 40°, the cold brought the mercury to 5, in 1732: At Paris, in 1709 and 1710, the mercury sunk to 8: At Leyden, in 1729, to 5: And at Utrecht, to 4. At London, in 1709 and 1710, the cold sunk the spirits almost down to the artificial cold of an ice and salt mixture: And in 1709, the mercury sunk to 0 at Copenhagen, lat. 55° 43′. At Upsal, in 1732, the mercury was at one degree below 0: And at Petersburgh, lat. 59° 56′, the cold was severe enough to sink the mercury to 28 below 0. But in more northern latitudes, the cold is much more extreme. Maupertuis, who wintered at the north polar circle in 1736-7, found the degree of cold at Torneo *, lat. 65° 51′, sufficient to have made the mercury sink to 33 below 0: And yet this degree of cold is inconsiderable, compared with that which may be produced by art. In our climate, the heat of the air is most agreeable from 50 to 65. In captain Cook's voyage round the world,

* Torneo is a town in Sweden; and it is said, the cold is so severe there, that sometimes people lose their fingers and toes.

in

in latitude 14° 32′ ſouth, the thermometer was raiſed to 85, which was the higheſt degree it got to during his voyage round the world; when he was croſſing the line it was about 80 and 82.

In Dixon's voyage the thermometer was never above 91, and when in latitude 0° 8′ ſouth, which is nearly under the equator, it was at 85: This was on February 27th, 1788.

" The heat in Bengal in the ſummer months is variable in the ſhade from 98 to 120 degrees, and in the ſun it probably does not fall ſhort of 140 degrees *."

The following extract is taken from Marſden's Hiſtory of Sumatra:

" Sumatra is an iſland in the Eaſt Indies; the equator divides it in almoſt equal parts, the one extremity being in 5° 33′ north, and the other in 5° 56′ ſouth latitude. It is found to lie 102° eaſt of Greenwich. No country in the world is, perhaps, better watered than this: Springs are found wherever they are ſought for; the rivers on the weſtern coaſt are innumerable. The heat of the air is by no means ſo intenſe as might be expected in a country occupying the middle of the torrid zone; it is more temperate than in many regions without the tropics; the thermometer, at the moſt ſultry hour, which is about two in the afternoon, generally fluctuating between 82 and 85 degrees. I do not recollect to have ever ſeen it higher than 86 in the ſhade: At ſun-riſe it is

* Dr. Watſon's Eſſays.

uſually as high as 78." I do not find that Mr. Marſden has mentioned the degree of heat of the ſprings in Sumatra.

Dr. Moſely, in his book on Tropical Diſeaſes, ſays, "In countries between the tropics the heat is nearly uniform, and ſeldom has been known to vary through the year on any given ſpot, either by day or night, more than 16 degrees. It is at a medium on the coaſt, and on the plains not much elevated above the level of the ſea, at about 80 degrees of Fahrenheit's, or at 21 degrees of Reaumer's thermometer."

From what I have already mentioned it appears, that the heat of the wells of Kingſton in Jamaica is about 30 degrees hotter than the wells in the neighbourhood of London, and the difference of the heat of the air is nearly the ſame. Kingſton in Jamaica, where the mean heat of the wells and air is 80, is about 17° north of the equator, and London about 51°; the difference, therefore, between London and Kingſton is 34°, ſo that the heat of the wells and air, on a medium, increaſes from London to Kingſton about one degree of heat to every degree of latitude *. Hence might we not, with ſome degree of probability, infer, that as the increaſe of heat in 34° of latitude is 30, the heat in 17° of latitude may increaſe at leaſt 10°; and if it did, it would make the mean heat at the equator 90 degrees. And, for my own part, I am ſtrongly inclined to think, that at the centre of the globe the mean heat of the air, as well as of the earth, is about 90 degrees of Fahrenheit's thermo-

* And ſo it does between Edinburgh and London.

meter,

meter, and, perhaps, at the poles the mean cold is as low as 0.

Africa, as it were, ſtands in the centre of the globe, and, according to geographers, it is 4300 miles long, and 3500 miles broad; and, from the beſt accounts we have, it is the hotteſt country in the world.

" As the equator divides this extenſive country almoſt in the middle, and the far greateſt part of it is within the tropics, the heat in many places is almoſt inſupportable to an European, it being there increaſed by the reflection of the ſun's rays from vaſt deſerts of burning ſands. The coaſts, however, and banks of rivers, ſuch as the Nile, are generally fertile; and moſt parts of this region are inhabited, though it is far from being ſo populous as Europe or Aſia. In many parts of Africa ſnow never falls in the plains, and it ſeldom lies but on the tops of the higheſt mountains. The natives in theſe ſcorching regions would as ſoon expect that marble ſhould melt and flow in liquid ſtreams, as that water, by freezing, ſhould loſe its fluidity, be arreſted by the cold, and, ceaſing to flow, become like the ſolid rock.

" The annual exportation of poor creatures from Africa hath exceeded 100,000, many of whom are driven a thouſand miles to the ſea-coaſt, their villages having been ſurrounded in the night by an armed force, and the inhabitants dragged into perpetual captivity. Thoſe, who commit treſpaſſes againſt their laws, are, at the deciſion of twelve elders, ſold for ſlaves for the uſe of their government, and the

ſupport of their chiefs. Theft, adultery, and murder, are the higheſt crimes; and whenever they are detected, ſubject the whole family to ſlavery. But any individual condemned to ſlavery for the crime of his relation, may redeem his own perſon by furniſhing two ſlaves in his room; or, when a man commits one of the above cardinal crimes, all the male part of his family are forfeited to ſlavery—if a woman, the female part is ſold: This traffic in crimes makes the chiefs vigilant. Nor do our planters who purchaſe them, uſe any pains to inſtruct them in religion, to make amends for the oppreſſion thus exerciſed on them. I am ſorry to ſay, they are naturally averſe to every thing that tends to it; yet the Portugueſe, and French, and Spaniards, in their ſettlements, ſucceed in their attempts to inſtruct them, as much to the advantage of commerce, as of religion. It is for the ſake of Chriſtianity, and the advantages accompanying it, that the Engliſh ſlaves embrace every occaſion of deſerting to the ſettlements of thoſe nations.

"It is high time for the legiſlature to interfere, and put an end to this moſt infamous of all trades, ſo diſgraceful to the Chriſtian name, and ſo repugnant to the principles of our conſtitution. Let the negroes in our iſlands be properly treated, made free, and encouragement given to their population—meaſures that would be attended with no leſs profit than honour *."

* Guthrie's Geography.

Africa,

Africa, comparatively ſpeaking, is but little known, modern travellers having penetrated no great way into its interior parts; ſo that we are not only ignorant of the bounds of its interior parts, but even of the names of ſeveral of the inland countries. From the beſt and lateſt accounts we have of the inhabitants of Africa, they are frequently at war with one another. This is not much to be wondered at, when we ſee the profeſſed Chriſtians and enlightened philoſophers of Europe cauſing the fields to ſwim with the blood of each other.

In the year 1788 a number of noblemen and gentlemen formed themſelves into a ſociety for the purpoſe of promoting the diſcovery of the inland diſtricts of Africa; and they have publiſhed their proceedings, which I have read; but it does not appear that they have yet made any great progreſs. In page 90 of their book it is ſaid, "The heats of Fezzan, which begin in April, and continue till November, are intenſe; that from 9 in the morning till ſunſet the ſtreets are only frequented by the labouring people, and even in the houſes reſpiration would be difficult, if the expedient of wetting the apartments did not furniſh its ſalutary aid. Of this torrid climate the fierceneſs is chiefly felt from the month of May to the end of Auguſt, during which period the courſe of the wind is uſually from the E., the S. E., and the S. W.; and though from the two latter points it blows with violence, the heat is often ſuch as to threaten inſtant ſuffocation; but if it happens to change, as for a few days it ſometimes does, to

the weſt or to the north-weſt, a reviving freſhneſs immediately ſucceeds." Fezzan, according to the map which the ſociety has given, lies between 25 and 30° of north latitude.

Mr. Brydone, in his Travels through Sicily, found the thermometer riſe to 112. This happened when the wind blew from the ſouth-eaſt, which is called there the ſirocco wind, and which is ſuppoſed to ariſe from the lands of Africa, in the neighbourhood of Syria. Mr. Jones ſays, that if the heat of this was ſuch as has been reported by Mr. Brydone, it is probably the hotteſt air that has yet been obſerved with any accuracy in the known world. However, we find a more modern writer than Mr. Jones give an account of a greater degree of heat in the air than that mentioned by Mr. Brydone: I mean Mr. Bruce, from whoſe Travels I ſhall give the following extract:

" Chendi, by repeated obſervations of the ſun and ſtars made for ſeveral ſucceeding days and nights, I found to be in latitude 16° 38′ 35″ north; and at the ſame place, the 13th of October, I obſerved an immerſion of the ſatellite of Jupiter, from which I concluded its longitude to be 33° 24′ 45″ eaſt of the meridian of Greenwich. The higheſt degree of the thermometer of Fahrenheit in the ſhade was on the 10th of October at one o'clock P. M. 119°, wind north; the loweſt was on the 11th at midnight, 78°, wind weſt, after a ſmall ſhower of rain. The degree of the thermometer does not convey any idea of the effect the ſun has upon the ſenſations of the body or colour of the ſkin. Nations of blacks live within latitude

titude 13° and 14°, when, 10° ſouth of them, nearly under the line, all the people are white, as we had an opportunity of ſeeing daily in the Galla, whom we have deſcribed. Cold and heat are terms merely relative, not determined by the latitude, but by the elevation, of the place. When, therefore, we ſay hot, ſome other explanation is neceſſary concerning the place where we are, in order to give an adequate idea of the ſenſation of that heat upon the body, and the effects of it upon the lungs. The degree of the thermometer conveys this very imperfectly: 90 is exceſſively hot at Loheia in Arabia Felix; and yet the latitude of Loheia is but 15°, whereas 90 at Sennaar is, as to ſenſe, only warm, although Sennaar, as we have ſaid, is in latitude 13°. At Sennaar then I call it cold, when one, fully clothed and at reſt, feels himſelf in want of fire; I call it cool, when one, fully clothed and at reſt, feels he could bear more covering all over, or in part, more than he has then on; I call it temperate, when a man, ſo clothed and at reſt, feels no ſuch want, and can take moderate exerciſe, ſuch as walking about a room without ſweating; I call it warm, when a man, ſo clothed, does not ſweat when at reſt, but upon moderate motion ſweats, and again cools; I call it hot, when a man ſweats when at reſt, and exceſſively on moderate motion; I call it very hot, when a man, with thin or little clothing, ſweats much though at reſt; I call it exceſſive hot, when a man, in his ſhirt at reſt, ſweats exceſſively, when all motion is painful, and the knees feel feeble as after a fever; I call it exceſſive hot, when the ſtrength fails, a diſ-

poſition to faint comes on, and a ſtraitneſs is found in the temples, as if a ſmall cord was drawn tight round the head, the voice impaired, the ſkin dry, and the head ſeems, more than ordinary, large and light.

"At Sennaar from 70 to 78 in Fahrenheit is cool; from 79 to 92 temperate, at 92 begins warm. Although the degree of the thermometer marks a greater heat than is felt by the body of us ſtrangers, it ſeems to me that the ſenſations of the natives bear ſtill a leſs proportion to that degree than ours. On the 2d of Auguſt, when I was lying perfectly enervated on a carpet in a room deluged with water, at twelve o'clock, the thermometer at 116, I ſaw ſeveral black labourers pulling down a houſe with great vigour, without any ſymptoms of being at all incommoded."

When the air is heated to 116 degrees, the evaporation muſt be great*; ſo that Mr. Bruce, in that caſe, I think, muſt have been as if in a hot bath

* Dr. Watſon, in his Chemical Eſſays, ſays that 1973 gallons of water can be raiſed from an acre of ground in twelve hours, when the heat at the ſurface of the ground is 96.

"During the extreme heat of the wind from the land, I have ſeen the mercury in Fahrenheit's thermometer riſe in the ſhade to 114 degrees. I have known ſeveral inſtances of perſons dying ſuddenly during the heat; yet theſe accidents were to be aſcribed to intemperance, or to their expoſing themſelves improperly abroad, rather than to the ſole and immediate heat of the weather, which is not thought dangerous, or even unhealthy, to thoſe who live with moderation, and do not go out in the exceſſive heat of the day." See Sketches relating to the Hiſtory, &c. of the Hindoos, p. 411.

bath.

bath. I do not recollect to have read in Bruce's Travels of what heat the ſprings or wells are in the countries of Africa through which he travelled. He tells us of his drinking of the water of the ſource of the Nile, but does not ſay whether it was warm or cold. The taking notice of the heat of the waters in foreign hot countries ſeems to have been omitted by many travellers.

By ſome accurate obſervations that were made on the heat of Bath and Briſtol water by Mr. Canton, it appears that a thermometer held in the ſtream from the common pump of the King's bath, after pumping about half an hour, was raiſed to 112, and the ſtream from the common pump of the hot bath raiſed it to 114.

Buxton water has been obſerved to raiſe the thermometer to 80, and that of Matlock to 66 or 68. Dr. Falconer ſtates the heat of the Bath waters, as they are commonly drank, of the King's bath 116, and of the Hot bath 116, of the Croſs bath 112. I have read of ſprings being ſo hot that their water would boil eggs, &c.

There are ſeveral different thermometers in uſe among gardeners and others; but Fahrenheit's is the moſt general, and undoubtedly the beſt.

In my journal I have ſet down what ſort of weather we had on every day, and the changes at or near about every hour of the day, at Addiſcombe Place, during one year.

In the weather all mankind are leſs or more intereſted, and they ſeldom fail to make known

their anxiouſneſs by bringing it into converſation, when no other ſubject is going forward. In the courſe of his labours the farmer is obliged to be conformable to it; the journies of the traveller is regulated by it; to the ſailor it is matter of life and death; armies are greatly concerned in it; and the gardener, in his labours and productions, is no leſs affected by it than either.

After all the knowledge which men can acquire, they will ſtill remain under much uncertainty; but they may acquire ſo much as may be the means of avoiding much inconvenience. If the heat and cold of the weather depended entirely on the courſe of the year, and if the heat of climates were dependant on their latitude, then the weather might be brought to ſome regular theory. However, as general rules, in this part of the world, are ſubjected to many interruptions, in this caſe we are at a loſs to-day to know what ſort of weather to-morrow may bring forth; for the weather depends on cauſes with which we are but little acquainted. Therefore, inſtead of having principles and rules to direct us, as in other ſciences, we are obliged to betake ourſelves to the arts of prognoſtication, and it is a work of time and great obſervation to attain any ſkill in it, though every perſon, arrived at the years of maturity, pretends to ſome degree of it.

In general, the ſpring and autumn are mild, the ſummer warm, and the winter cold; but rains and ſhowers, winds and ſtorms, miſts and vapours, are uncertain and occaſional. The ſouth and ſouth-weſt winds

winds are in general warm, becauſe they blow from a warm country; the north wind is cold, becauſe it blows from a cold country; the eaſt and north-eaſt winds are dry, cold, and blighting, becauſe they blow over the high mountains of the continent; but it is ſtill a matter of doubt what ſort of weather is likely to attend the winds.

When covering up the cucumber frames in the evenings, I take a view of the ſky, from which I form an idea of what ſort of weather is likely to happen in the night, and regulate the coverings and air accordingly; and ſometimes at nine or ten o'clock at night I alter the air, by increaſing or reducing it, ſo that it may correſpond with the temperature of the night, as nearly as can be gueſſed at.

The beſt rule we have for predicting the weather is the inſtrument called a Barometer, which was invented by Torricelli, as we are informed, in the year 1643.

An ingenious author obſerves, that, by means of the barometer, we may regain the knowledge which ſtill reſides in brutes, and which we forfeited by not continuing in the open air, as they generally do, and, by our intemperance, corrupting the craſis of our organs of ſenſe

The following are Mr. Patrick's obſervations on the riſing and falling of the mercury. They ſeem to be very juſt, and are to be accounted for on the ſame principles with thoſe of Dr. Halley:

"The riſing of the mercury in general preſages fair weather; and its falling, foul weather, as rain,

ſnow, high winds, and ſtorms. In very hot weather the falling of the mercury indicates thunder; in winter, the riſing preſages froſt; and in froſty weather, if the mercury falls three or four diviſions, there will certainly follow a thaw; but in a continued froſt, if the mercury riſes, it will certainly ſnow.

"When foul weather happens ſoon after the falling of the mercury, expect but little of it; and, on the contrary, expect but little fair weather when it proves fair ſhortly after the mercury has riſen. In foul weather, after the mercury riſes much and high, and ſo continues for two or three days before the foul weather is quite over, then expect a continuance of fair weather to follow.

"In fair weather, when the mercury falls much and low, and thus continues for two or three days before the rain comes, then expect a great deal of wet, and probably high winds.

"The unſettled motion of the mercury denotes uncertain and changeable weather.

"You are not ſo ſtrictly to obſerve the words engraved on the plates (though, for the moſt part, it will agree with them), as the mercury's riſing and falling; for if it ſtands at *much rain*, and then riſes up to *changeable*, it preſages fair weather, although not to continue ſo long as it would have done if the mercury were higher; and ſo, on the contrary, if the mercury ſtood at *fair*, and falls to *changeable*, it preſages foul weather, though not ſo much of it as if it had ſunk down lower."

From

From theſe obſervations it appears that it is not ſo much the height of the mercury in the tube, that indicates the weather, as the motion of it up and down. Wherefore, to paſs a right judgment of what weather is to be expected, we ought to know whether the mercury is exactly riſing or falling; for which end the following rules are to be obſerved:

If the ſurface of the mercury is convex, ſtanding higher in the middle than at the ſides, it is generally a ſign that the mercury is riſing.

If the ſurface of the mercury is concave, or hollow in the middle, it is ſinking.

If it is plain or level, or, rather, if it is a little convex, the mercury is ſtationary; for mercury being put into a glaſs tube, eſpecially a ſmall one, will naturally have its ſurface a little convex; becauſe the particles of mercury attract each other more forcibly than they are attracted by glaſs.

If the glaſs be ſmall, ſhake the tube, and if the air be grown heavier, the mercury will riſe about half the tenth of an inch higher than it ſtood before; if it is grown lighter, it will ſink ſo much. This proceeds from the mercury ſticking to the ſides of the tube, which prevents the free motion of it, until it is diſengaged by the ſhock. Therefore, when an obſervation is to be made by ſuch a tube, it ought always to be ſhaken firſt; for ſometimes the mercury will not vary of its own accord until the weather it ought to have indicated be preſent. Dr. Derham ſays that the variations of the barometer are greateſt neareſt the pole; in places near the equinoctial there is

ſcarce

ſcarce any variation at all. A thick dark ſky, laſting for ſome time without ſun or rain, generally becomes fair, then foul. A change in the warmth of the weather is generally followed by a change in the wind.

Moſt vegetables expand their flowers and down in ſunſhiny weather, and towards the evening and againſt rain cloſe them again, eſpecially at the beginning of their flowering. This is viſible enough in the down of the dandelion and other downs, and eminently in the flowers of pimpernel. The rule is, if the flowers be cloſe ſhut up, it betokens rain, and if they be ſpread abroad, fair weather. The ſtalks of the trefoil ſwell againſt rain, and the like may be obſerved, though not ſo ſenſibly, in the ſtalks of moſt other plants.

When a lowering redneſs is ſpread far upwards from the horizon, either in the morning or in the evening, it is generally ſucceeded by rain or wind, and ſometimes by both. When black clouds move contrary to the wind, it is likely the wind will ſoon change, and rain follow. When the clouds ſcatter and diſappear, or diſſolve in the air, it is a ſign of fair weather. The rainbow in the clouds prognoſticates ſhowery ſqually weather. Black clouds, collecting and augmenting in the air under other clouds, portend wind and rain. When the ſun ſets in a bank of black watery-like clouds, it augurs foul weather. When the rays of the ſun, breaking through the clouds, are viſible in the air, and the air ſeems filled with vapours, it betokens rain and ſhowery weather. When the ſky is overcaſt with lofty light clouds which appear

pear ſtationary, and the ſun appears faintly through the clouds, it is likely there will be a change of weather. A circle round the ſun or moon indicates a change of weather. I have frequently obſerved the earth and graſs almoſt entirely covered with threads like thoſe of ſpiders; after which, dry weather has conſtantly for a time ſucceeded. Theſe threads cannot be viſibly ſeen but when the ſun ſhines, nor unleſs a perſon ſtand with his face towards the ſun. I am now writing on the 21ſt day of October, and there has been no rain here * ſince the 2d, and on every ſunſhiny day ſince that time I have obſerved the earth and graſs covered with theſe threads. One day the beginning of laſt week I was about ſowing a field with wheat, which field had been under fallow the preceding ſummer; and I obſerved the ſurface of the land, both before and behind the harrows, covered with theſe threads, ſuſpended between the clods, waving and ſparkling in the rays of the ſun. How theſe threads came to be extended from clod to clod in ſo ſhort a time after the ground was moved by the harrows, is what I cannot rightly comprehend, therefore muſt leave it for the deciſion of philoſophers.

* At Addiſcombe Place.

ON THE

CULTURE OF THE CUCUMBER.

THE Cucumber, cucumis in botany, is a genus of the monecia ſyngeneſia claſs. Its characters are theſe: It hath male and female flowers on the ſame plant, which are bell-ſhaped, of one petal, which adheres to the empalement, and is cut into five rough ſegments. The male flowers have three ſhort ſtamina, which are inſerted in the empalement; the female flowers have no ſtamina, but have three ſmall pointed filaments without ſummits. The germen is ſituated under the flower, which afterwards becomes an oblong fruit with three cells, containing oval flat-pointed ſeeds.

There are, I believe, only three ſpecies of the cucumber, the common, the white, and the long Turkey, but there are many varieties.

The long green cucumber with black prickles, I think is the beſt for forcing. I have a very good ſort of it, which I have had for eleven or twelve years, and which, when fit for the table, runs from ſix to twelve inches long, and, when ripe, runs to about eighteen or twenty inches long.

I cannot tell of what climate the cucumber is a native, but I imagine it is a native both of Aſia and Africa. It is above three thouſand years ſince mention was firſt made of it; for in the eleventh chapter of the Fourth Book of Moſes, called Numbers, it is thus recorded: "And the mixt multitude that was among them fell a-luſting, and the children of Iſrael alſo wept again, and ſaid, Who ſhall give us fleſh to eat? We remember the fiſh which we did eat in Egypt freely, the cucumbers, and the melons, and the leeks, and the onions, and the garlic." From this we may infer that the cucumber in thoſe days grew plentifully in Egypt: It is, therefore, not improbable but Egypt may be its native country.

Egypt lies between the 20th and 32d degree of north latitude, and between the 28th and 36th degree of eaſt longitude; and, with regard to the temperature of the weather in it, in April and May the air is hot and often infectious, and the inhabitants are almoſt blinded with drifts of ſand. Thoſe evils are remedied by the riſing and overflowing of the Nile.

"Whoever is in the leaſt acquainted with literature knows that the vaſt fertility of Egypt is owing to the annual inundation of the Nile, occaſioned by the rains which fall during May, June, and July, in Abyſſinia, and the neighbouring countries of Africa. According to Mr. Volney, the commencement of the inundation is not entirely aſcertained, though the Copts fix it at the 19th of June. At the height of its flood in the lower Egypt nothing is to be ſeen in the plains but the tops of foreſt and fruit trees, their towns

towns and villages being built upon eminences either natural or artificial. When the river is at its proper height the inhabitants celebrate a kind of jubilee with various feſtivities.

" The banks or mounds that confine it are cut by the Turkiſh Baſha, attended by his grandees; but, according to captain Norden, who was preſent on the occaſion, the ſpectacle is not very magnificent. When the banks are cut, the water is let into what they call the Chalis, or grand canal, which runs through Cairo, from whence it is diſtributed into cuts for ſupplying their fields and gardens. This being done, and the waters beginning to retire, ſuch is the fertility of the ſoil, that the labour of the huſbandman is next to nothing. He throws his wheat and barley into the ground in October and May, he turns his cattle out to graze in November, and in about ſix weeks nothing can be more charming than the proſpect which the face of the country preſents, in riſing corn, vegetables, and verdure of every ſort. Oranges, lemons, and fruits, perfume the air. The culture of pulſe, melons, ſugar-canes, and other plants which require moiſture, is ſupplied by ſmall, but regular, cuts from ciſterns and reſervoirs. Dates, plantanes, grapes, figs, and palm-trees, from which wine is made, are here plentiful. March and April are the harveſt months, and produce three crops, one of lettuces and cucumbers (the latter being the chief food of the inhabitants), one of corn, and one of melons.

" The Egyptian paſturage is equally prolific, moſt of the quadrupeds producing two at a time, and the ſheep four lambs a year *."

In England, and eſpecially near large cities and towns, great quantities of cucumbers are raiſed. Not only gentlemen, but almoſt every tradeſman who has a garden and dung, have their cucumber frame. In the ſummer time the market gardens round London produce vaſt quantities to ſupply that extenſive metropolis.

The Hiſtoria Plantarum, publiſhed under the name of Boerhaave, informs us, that if the branches of cucumbers are much trodden upon, the fruit will be bitter and emetic; and that a water diſtilled from cucumbers, when full ripe and beginning to putrify, purges ſmartly in the quantity of a drachm.

I myſelf have often found cucumbers bitter in taſte; which bitterneſs I conceive is occaſioned in them through the want of proper food; and the proper food of a cucumber plant is contained in ſweet earth, ſweet air, ſweet water, and a ſufficiency of heat.

I have been told that the cucumber is one of the four great coolers of the ſhops, and that it is almoſt an univerſal ingredient in emulſions, and is found of ſervice in fevers and nephritic complaints.

" The Galeniſts hold them to be cold and moiſt in the ſecond degree, and then not ſo hot as either lettuce or purſlain. They are excellent good for a hot ſtomach and hot liver; the immeaſurable uſe of them fills the

* Guthrie's Geography.

body

body full of raw humours, and ſo indeed the immeaſurable uſe of any thing elſe doth harm. The juice of cucumbers, the face being waſhed therewith, cleanſeth the ſkin, and is excellent good for hot rheums in the eyes. It is uſual to uſe the ſeeds in emulſions, as they make almond milk; but a far better way, in my opinion, is this: When the ſeaſon of the year is to take the cucumbers, bruiſe them well, and diſtil the water from them; the face being waſhed with the ſame water cureth the reddeſt face that is.

"It is alſo excellent for ſun-burning, freckles, and the morphew."

A warm ſituation, ſheltered from the winds by buildings, ſheds, or thickets, and groves of trees, is of great advantage, and neceſſary for a cucumber bed to ſtand in; for were it fully expoſed to, and unprotected from, the high and piercing winds, eſpecially in the winter and ſpring months, there would be but little probability of conſtant regular ſucceſs. For when high winds are ſuffered to blow againſt a cucumber bed, they have a very powerful effect on it; for in that caſe the heat in a ſhort time will not only be greatly abated, but alſo forced and driven into the corners of the frames, and conſequently ſome parts thereof are rendered too cold, whilſt other parts are made too warm; and of courſe the plants are all equally endangered, retarded in their growth, and perhaps ſome, if not all of them, totally deſtroyed. Therefore, when a cucumber bed is about to be built, the firſt object of conſideration ſhould be,

to have it, as well as poſſible, ſheltered from the high winds and boiſterous ſtormy weather.

That the bed be not by any thing whatever obſtructed from the genial or warm and nouriſhing rays of the ſun, is another object of great importance. For although artificial heat will cauſe the ſeeds of cucumber plants to vegetate and ſpring forth, yet that vegetable can be brought to no degree of perfection without the influence of the ſun, and even his rays are at times abſolutely neceſſary. However, it will be found ſufficient, if, in the ſhorteſt days in winter when the ſun ſhines, he be not hindered from ſhining on the frames from about ten o'clock in the morning till about two in the afternoon.

It is alſo worth conſideration to have the bed built in or near to the kitchen garden, ſo that it may be handy to carry from thence the rotten expended dung to ſuch quarters of the garden as may require to be manured. Regard alſo ſhould be had that nothing ſtand in the way to hinder carts or waggons from bringing the warm dung near to the place in which the bed ſtands.

There are two ſorts of earths or moulds, without which, or a part of one or the other, I apprehend, a cucumber plant will not grow vigorous, nor produce fruit plentifully. The one is animal mould, the other is vegetable mould, and which are in fact nothing elſe but the putrefaction of earth after it has been altered by paſſing through the animal and vegetable veſſels.

What

What I mean by animal mould is the dung of horſes or of cows, after it has undergone a fermentation by being uſed for the rearing melons or cucumbers, and has afterwards lain in a heap expoſed to the ſun and air, and been frequently turned and well worked, till it has become a black, light, rich mould *. But among ſuch moulds are always conſiderable quantities of vegetables, ſuch as hay, ſtraw, and perhaps weeds of different ſorts, which have not paſſed through animal veſſels; therefore it is a compoſition of dung and rotten vegetables. In this ſort of mould cucumber plants will grow remarkably ſtrong; but I think it is rather too rich, and therefore thoſe who uſe it had better mix it with ſome light ſoil, which has no unpleaſant or diſagreeable ſmell.

That which I call vegetable mould is what is made of the leaves of trees. The method I take to make it is this: In the months of December or January, or when the leaves are in a decaying ſtate and wet, I have them raked together, and laid in a heap as large as will raiſe a moderate heat; and during the ſpring and ſummer months I have them frequently turned and well worked, and by October and November following they are rotten and fit for uſe: But if they are ſuffered to lie for a longer ſpace of time before uſing, their mould is ſtill better, becauſe it will have become more rotten, and of a more ſolid tex-

* Perhaps with more propriety may the earth of bones, fleſh, horns, and ſkins, be called animal mould. When ſuch things are by putrefaction reduced to earth, it undoubtedly contains much of the food of plants.

ture, and therefore will not ſink ſo much after being put into the frames, as if put in when leſs rotten.

The leaves of which I make the vegetable mould, are a mixture of the elm, lime, beech, ſycamore, horſe and ſweet cheſnut, ſpruce and Scotch fir, walnut, laurel, oak, evergreen oak, aſh, &c. and among them are withered graſs and weeds of various ſorts. This vegetable mould, without a mixture of any thing beſides, is what I uſe for growing cucumbers in, and, by experience, I find it preferable to any other moulds, earths, or compoſts whatever, either in my new method of a brick bed, or in the old method of a bed made of hot dung.

Before I uſe the mould I have it run through a coarſe ſkreen or ſieve to free it of the bits of ſticks, and of the cones and tree ſeeds, ſuch as that of the horſe cheſnut, and of the ſpruce and Scotch fir.

Cucumbers will grow in almoſt any ſort of mould, though not with the ſame degree of vigour, provided they be ſupplied with a ſufficiency of heat, water, and air.

In Britain, eſpecially in the winter and ſpring months, one of the principal cauſes, without which cucumbers cannot be produced, is deficient, and that is, heat. In every county, and in every pariſh, and in every month of the year, earth, water, and air, may be found; but in every part, even in the moſt ſouthern counties of England, there is a deficiency of heat: For, as far I know, that vegetable called cucumber, does not, in any part of this country, come to any degree of perfection without ſome

aſſiſtance

aſſiſtance of artificial heat. Therefore, as the natural heat of this climate is deficient in its production, thoſe who wiſh to have it in perfection, muſt have recourſe to art to ſupply the inſufficiency of nature.

Late in the ſpring, and in the ſummer months, the heat of tan, or of the leaves of trees, may do; but in the winter and early in the ſpring, ſomething that raiſes a more powerful heat than theſe is required.

A place could be ſo conſtructed that cucumbers might be cultivated therein by means of the ſteam of water; but it would, I apprehend, be attended with ſuch expenſe that few would be willing to adopt the method, even ſuppoſing it were found to anſwer the purpoſe better than dung; which I am inclined to think it would not do, becauſe I conceive that the heat which is produced by fire, cannot be kept ſo ſteady as that which is produced by the fermentation of dung.

Cucumber plants will grow in a hot-houſe where the pine-apple is cultivated; but they will not be very long-lived there, for that is not a healthy climate for them.

Dung is the only thing yet found out, by the heat of which the cucumber may be advantageouſly cultivated.

It is not poſſible, nor is it neceſſary, to keep the air in the frames always up to the ſame degree of heat; but extremes on either ſide are dangerous, and ſhould be carefully avoided.

There

There is no neceſſity for having heat directly underneath the roots of the plants; for if the air in the frames be kept up to a proper degree of heat, that is ſufficient. In climates where the cucumber naturally grows, I apprehend there is no heat in the earth but what is raiſed in it by the heat of the ſun and the circumambient air, which ſeems to be warmed by the reflection of the ſun upon the earth.

It is not only neceſſary that in the frames the air be kept up to a ſufficient degree of heat, but it is abſolutely neceſſary that nothing pernicious or unwholeſome be conveyed into, or cauſed to ariſe in the frames among the plants by means of that heat. If the ſteam of the linings get in, it will hurt the plants; and if there be any thing which ſmells diſagreeably in the mould or underneath the mould in the frames, the heat of the linings will cauſe unhealthy vapours to aſcend from it, which in time will prove injurious to the plants. So that although there may be a degree of heat in the frames ſtrong enough for the growth of the plants, yet, through means of that heat, ſomething may ariſe in the frames which will become progreſſively, if not almoſt inſtantaneouſly, deſtructive of the plants, eſpecially when they are young and tender. Care, therefore, muſt be taken that nothing be introduced into the frames among the plants but what is of a ſweet wholeſome nature.

If it were poſſible to keep the heat in the frames always to 80 degrees, with the concurrence of proper air and moiſture, I am of opinion that that would be a ſufficient heat for the production of the cucumber.

In

In the ſhort days in winter little or no water is required, for the continual evaporation ariſing in the frames, and perſpiration of the plants caught by the glaſſes, keeps dropping down again upon the mould, and, in ſome degree, imitates a natural watering from the clouds, and which is of ſervice to the plants. Hence it would ſeem that the plants are often watered with the ſame water.

The mould in the pits retains the moiſture ſurpriſingly, which perhaps may be owing in ſome meaſure to the pits being conſtantly ſurrounded with the moiſt ſteam of the linings; and the bricks of the pits, and the tiles that cover the flues, being porous for aught I know, moiſture, by the force of evaporation or attraction, gets through them into the frames. But be that as it may, I know that nothing hurtful or unhealthy ever gets through the tiles or bricks into the frames among the plants. The quantity of water requiſite to be given to the plants depends upon the heat of the bed, the ſtrength and age of the plants, and alſo on the temperature of the weather. When the weather is cold, wet, or gloomy, and the air moiſt, they require leſs water than when the weather is clear, and the air more dry.

If too much water be given, it will hinder the fruit from ſetting and ſwelling kindly; and if too little water be given, the plants will grow weak, and the fruit hollow.

I never wiſh to water the plants with water warmer than 85 degrees, nor colder than 65. Although, in general, I try by the thermometer the warmth of the

the water I uſe, yet it is not neceſſary ſo to do. A good way to know if the water be of a proper temperature is to take your mouth full of it, and when it feels neither hot nor cold, then it is in a fit ſtate for accelerating the growth of the plants, or for making them grow faſt. I make it a conſtant rule never to water the plants but with clean ſweet water; and if the water be clean and ſweet, I am of opinion it makes little or no difference whether it be pump water, ſpring water, rain water, or river water. However, it is a good quality in water to bear ſoap, and make a lather therewith, which rain and river water readily do; but the pump and ſpring waters are found too hard to do it; yet this may eaſily be remedied in them, by letting them ſtand a few days in the open air and ſun's rays.

With regard to the time of the day in which the watering of the plants ought to be performed, I think it is not material, nor do I ever make any rule with reſpect to the time, but give them water at any hour of the day when I ſee they ſtand in need of it, and when it beſt ſuits my conveniency. Thoſe who have hot-houſes may get their water warmed there, and thoſe who have no hot-houſes may get ſome from the houſe, or from ſome other place where water is frequently heated. One gallon of hot water will properly warm ſeveral gallons of cold water. Late in ſpring and in the ſummer months the water may be warmed by expoſing it to the rays of the ſun.

A due proportion and continual ſupply of freſh air is at all times neceſſary, and more or leſs is required

quired according to the heat of the linings, the temperature of the weather, and the thickneſs of the coverings put on at nights.

When I ſay, *give air*, I mean that the lights ſhould be raiſed or tilted on the north ſide with pieces of wood made in the form of wedges, by means of which little or much air can be admitted at pleaſure.

The lights or ſaſhes of frames or boxes are ſeldom or ever made ſo exact as altogether to exclude the external air, or to hinder it from having a continual ingreſs and egreſs, or from going in and coming out of the frames continually. And as the frames get old they wear, and then let in more air than when they are new, ſo that new frames may require the uſe of the air-ſticks when old frames do not; therefore, in giving air, theſe and ſuch like matters ought always to be duly conſidered.

When the wind blows from the eaſt and north-eaſt, the current of air goes in at the weſternmoſt light of each frame, and comes out at the eaſternmoſt one; and when the wind blows from the weſt and north-weſt, it is juſt the reverſe, for it then goes in at the eaſternmoſt light of each frame, and comes out at the weſternmoſt one. That being the caſe, it is ſometimes adviſable to give leſs air at the light where the air goes in, than at that at which it comes out; for when the wind blows ſtrong from thoſe quarters, as well as from the ſouth-weſt and ſouth-eaſt, the end lights of each frame next to the quarters from whence the wind blows, will be the warmeſt.

The

The air and heat in the frames are always moſt regular and ſteady when the wind is calm, or the bed well protected, and when the wind is in the ſouth or in the north; but when the wind blows ſtrong from any of the other quarters, and is ſuffered to beat upon any part of the bed, the current of air will be irregular, and at times very ſtrong; and if there then happen to be a ſtrong new lining at the bed, and a great rank ſteam ariſing out of it, eſpecially at the north ſide, care, ſkill, and attention will be required, and muſt be exerted, for the preſervation of the plants; for the ſteam being nigh to the place where the air is admitted, if much air be given while the wind continues high, the ſteam will undoubtedly be carried by the current of air into the frames, and if the ſteam be of a pernicious quality, the plants will certainly be hurt thereby. When ſuch a caſe happens with me, I give but little or no air in the night time, and by frequent waterings I keep the ſteam of the linings down in the day-time; and this I continue to do till the winds ſubſide, or till the violent fermentation of the linings be ſomewhat abated. But if the bed be well ſheltered, ſuch precautions will be unneceſſary, for I have never experienced any hurtfulneſs in the ſteam ariſing out of the linings, except when the winds have been blowing ſtrongly on the bed, and ſoon after the application of a powerful new lining of rank horſe-dung, and when it was high up againſt the ſides of the frames near to the place where the air was given; and even

then the plants were not killed, but only ſome of their leaves injured.

As the ſteam riſes out of the dung of the linings it is quickly diſperſed and mixed with the common air, by which its pernicious qualities are almoſt inſtantaneouſly deſtroyed. It is, therefore, not likely that the ſteam ariſing from the linings on the outſide of the frames ſhould become hurtful to the plants in the frames, unleſs it were to paſs immediately from the linings into the frames before its pernicious qualities were meliorated or deſtroyed.

In the frames there is a continual ſteam or evaporation ariſing; and as this vapour is of a ſweet, healthy, invigorating nature, if too much air be given, it will paſs off too rapidly, and that before it has had time to render to the plants that ſervice which is neceſſary; and if too little air be given, the vapours will be retained too long, and become too thick, and thereby the free perſpiration of the plants will be obſtructed, which will ſoon render their ſtate weak and ſickly, and the fruit will neither ſet nor ſwell kindly.

In winter, when the heat of the linings is great, if care be not taken, the air in the frames will be rendered too dry. To prevent this, I either cover the flues thinly with moiſt mould, or keep them damp by watering *.

* In no part of the frame ſhould the mould be ſuffered to become dry and huſky. When the heat is great, water ſhould be frequently and plentifully poured upon the flues, which will keep the bricks and mould adjoining to them in a moiſt ſtate.

In

In giving and taking away the air I do it gradually, that is, by little and little at a time, which, without doubt, is the beſt way; for, as I obſerved before, ſudden changes are always attended with unpleaſant conſequences.

The linings are to be applied to the bed a few days before the plants are ready for finally planting out, in order that the mould and every thing in the frames may be properly warmed for their reception.

The dung of which the linings are to be made may either be caſt together in a heap, to bring it to a heat before it be laid round the bed, or it may be laid round the bed as it is brought from the dung-yard; but whichever of theſe methods be taken, when the linings are making up, the dung ſhould be well ſhaken, and laid up lightly, ſo that the heat of it may come up freely.

The linings are to be made nearly three feet broad in their foundation, and tapered up to about thirty inches at the top, by which they will retain their heat long, and in ſinking will keep cloſe to the bed, which is what ſhould at all times be paid proper attention to.

In the winter and ſpring months the linings ſhould be trodden upon as little as poſſible, for treading on them would be the means of ſtagnating their heat. But ſhould it at any time, in managing the plants, be found neceſſary to ſtand or kneel upon them, boards ſhould be laid on their tops for that purpoſe; which will prevent the weight of a perſon from taking that effect on them which it otherwiſe would do.

As the linings ſink, they are to be raiſed with freſh dung; but they ſhould ſeldom be raiſed higher than about the level of the mould in the frames in which the plants grow, eſpecially when there is a ſtrong heat in them; for when there is a great heat in them, if they are kept higher than the level of the mould, the heat dries the air in the frames too much. Nor ſhould they be ſuffered to ſink much below the level of the mould in the frames; for that, on the contrary, would cauſe too much moiſture in the frames, eſpecially in the winter and ſpring months.

When the heat begins to be too little, notwithſtanding the linings being kept to their proper height, the freſh unexhauſted dung on the top or upper part of them is to be laid aſide, and the exhauſted dung underneath to be taken away, and that which was laid aſide put in the foundation, and freſh dung laid above it in lieu of that which was carried away.

Both the ſide linings may be raiſed at one time, but both of them ſhould never be renewed together; for if both were to be renewed at the ſame time, it would for a time cool the frames too much, and when the heat of both came to its full ſtrength, it would probably be too powerful.

I ſeldom or never renew the end linings, becauſe I find the heat of the ſide ones fully ſufficient; for as there are flues or vacuities in every part of the bed, the ſteam, being fluid, circulates in, and warms every part thereof. And for the very ſame reaſon there is no occaſion for having a ſtrong heat in both the ſide linings at one and the ſame time.

In making up and pulling down the linings, care ſhould be taken not to injure the brick work.

The covering the lights in the winter and ſpring is abſolutely neceſſary; for, notwithſtanding the heat of the linings, it would be impoſſible to keep up a proper degree of heat in the frames for the plants without coverings. Therefore, the covering up in the evenings, and uncovering in the mornings, muſt be particularly attended to, and more or leſs put on according to the heat of the linings and the temperature of the weather. My method of covering up is as follows: In the firſt place I lay clean ſingle mats on the lights, in length and breadth juſt or nearly to cover the ſaſhes, taking care not to ſuffer any part of the mats to hang over the ſaſhes on or above the linings, for that would be the means of drawing the ſteam into the frames in the night-time. On theſe mats is ſpread equally a covering of ſoft hay, and on the hay is laid another covering of ſingle mats, upon which are laid two, and ſometimes three or four, rows of boards, to prevent the covering from being blown off by the winds. The mats laid on next to the glaſs are merely to keep the ſeeds and duſt which may happen to be in the hay from getting into the frames among the plants.

In covering up, ſteps or ſhort ladders muſt be uſed by thoſe whoſe office it is to cover and uncover; and great care muſt be taken not to break or injure the glaſs.

I know ſome gentlemen who have pits built in their cucumber and melon grounds: Theſe they have built

built wide enough to make the bed in the middle, and room on each ſide of the bed for the linings. This is a very good method; but the building of ſuch pits is attended with conſiderable expenſe: Thoſe who have them ſhould take care that there be drains as low as the foundations of the bed to carry off the water from it.

The method of raiſing the plants from ſeed is to be ſeen in the beginning * of the journal of their daily management. I ſhall therefore proceed to give the method I follow in ſtopping the plants, and in keeping them regularly thin.

When the ſeedling plants have one or two joints, I ſtop them, after which they generally put forth two ſhoots, each of which I let run till they have made one or two clear joints, and then I ſtop them; and afterwards I continue throughout the ſeaſon to ſtop the plants at every joint; and the method I take to do it is as follows:

When the plants ſhoot forth again after the ſecond ſtopping, they ſeldom miſs to ſhow fruit at every joint, and alſo a tendril; and between this tendril and the ſhowing fruit may clearly be ſeen the rudiment of another ſhoot; and when the leading ſhoot has extended itſelf fairly paſt the ſhowing fruit, then with my finger and thumb I pinch it and the tendril off juſt before the ſhowing fruit; ſo that in pinching off the tendril and the ſhoot, the ſhowing fruit is not injured. Thus ſtopping the leading ſhoot ſtops

* And alſo at the end. See October 5th, 1793.

the juices of the plant, and is the means of enabling the next ſhoot (the rudiment of which was apparent when the leading ſhoot was ſtopped) to puſh vigorouſly, and the fruit thereby alſo receives benefit.

When the plants are come into bearing, if the vines are ſuffered to make two joints before they are ſtopped, at the firſt of theſe joints, as I before ſaid, will be ſeen ſhowing fruit, a tendril, and the rudiment of a ſhoot; but at the ſecond joint there is ſeldom to be ſeen either ſhowing fruit or the rudiment of a ſhoot, but only a tendril and the rudiments of male bloſſoms. It is therefore evident, and but reaſonable, that the ſhoot ſhould be ſtopped at the firſt of theſe joints; for were the ſhoot to be let run paſt the firſt joint, and ſtopped before the ſecond, perhaps no ſhoot would ever ſpring forth at the ſaid ſecond joint, but only a cluſter of male bloſſoms or leaves, which would ſerve for no good purpoſe, but would rather exhauſt the juices of the plant, which ought to be thrown into the productive parts of it.

If the plants are ſuffered to bear too many fruit, that will weaken them, and in ſuch caſe ſome of the ſhoots will loſe their leaders, that is, the rudiment of ſome of the ſhoots will not break forth, the numbers of fruit having deprived them of their proper ſhare of the vegetative juices. The rudiments of ſome of the ſhoots may alſo be injured by accident, which ſometimes prevents their puſhing; but from whatever cauſe this happens, it matters not; for by the loſing of its leader the ſhoot is rendered unfruitful, and therefore ſhould be cut entirely off.

In

In the courſe of the ſpring and ſummer months ſeveral ſhoots break forth here and there from the old ones. When too many break out, I cut off the weakeſt of them cloſe to the old ſhoots, and thoſe which I let remain I treat, with regard to ſtopping, nearly in the ſame manner as young plants.

If the old ſhoot, from which the new one burſt forth, lie cloſe to the mould, it ſoon ſends forth roots from the ſame joint from which the young ſhoot proceeded, by which the young ſhoot is much invigorated, and the old plant, in ſome meaſure, renovated.

When this young plant is fairly formed on the old ſhoot, it ſomewhat reſembles a young plant formed and ſtruck root on a ſtrawberry runner. And if the ſhoot were to be cut off on each ſide of the newly formed plant, and no part of the plants left in the frame but itſelf, by proper treatment it would ſoon extend itſelf all over the frame.

In winter, when the plants are young, and before they come into bearing, it ſometimes happens that they ſend forth too many ſhoots: In that caſe I cut the weakeſt of them off, not ſuffering them to become crowded and thick of vines, for that would weaken and prevent the plants from bearing ſo early as they ought to do.

The leaves of the plants I always keep regularly thin. The oldeſt and worſt of them I cut off firſt, and I cut them off cloſe to the ſhoot on which they grow. This is neceſſary and right; for if any part of the

ſtem of the leaf were to be left, it would ſoon putrify, and raiſe unhealthy vapours among the plants.

It is the female bloſſoms or flowers that bear the fruit; but if they were not to be impregnated by the male flowers, they would prove barren and unfruitful.

The female bloſſoms are eaſily to be diſtinguiſhed from the male ones, for the rudiment of the fruit is apparent at the bottom of the female flowers, and the flowers have no ſtamina, but have three ſmall pointed filaments without ſummits: Whereas the male bloſſoms have not any rudiment of fruit about them, but in the centre of the flower are three ſhort ſtamina, which are inſerted in the impalement.

When the female or fruit bloſſoms are in full blow, I take a male bloſſom which is in full blow, and holding it in one hand, with the other I ſplit and tear off the flower leaves or petals, taking care not to hurt the ſtamina or male part. I then hold the male bloſſom thus prepared between the finger and thumb of my right hand, and with my left hand I gently lay hold of the female bloſſom, and holding it between two fingers, I put the prepared male bloſſom into the centre of the female bloſſom, and there the farina, polen, or duſt of the anthera, clings or ſticks to the ſtigma, and thus the impregnation of the fruit is effectuated, and the plants are thereby rendered fruitful, which, being in frames in a climate by art made for them, would otherwiſe in a great degree be rendered barren and unproductive; and which I have

have frequently known to have been the caſe, even when at the ſame time the plants were in a vigorous flouriſhing ſtate.

I generally leave the prepared part of the male bloſſom ſticking in the centre of the female one, and take a freſh male bloſſom to every female bloſſom. But if male bloſſoms run ſcarce, which ſeldom or never happens, I make one male bloſſom do for two or three female ones.

When the frames are going to be ſet upon the bed, a layer of mortar is ſpread all round upon the upper courſe of brick-work on which the bottoms of the frames are to reſt. Thus the frames are ſet in mortar on the bricks; and the flues are with a bricklayer's bruſh well waſhed, and rubbed with a thick grout made of lime and water, which ſtops every crack or hole, and prevents the ſteam of the linings from getting into the frames. This waſhing of the flues I have done at leaſt once a year, and oftener, if need be, for no crack or hole is ever ſuffered to remain unſtopped in the flues.

I find little or no trouble in keeping the flues perfectly cloſe, nor is it indeed likely that they ſhould become troubleſome if the bed ſtands on a ſound foundation, for the heat of the dung has not that powerful effect on the flues, as fire heat has on the flues of a hot-houſe; becauſe the heat of dung is more ſteady and not ſo violent as the heat of fire; and beſides, the flues of the cucumber bed are almoſt always in a moiſt ſtate, which is a preventative in them againſt cracking or rending.

When the bed is firſt built, the pits are about three feet in depth below the ſurface of the flues. Theſe pits I have filled up about a foot high, ſome of them with rough chalk, ſome of them with ſmall ſtones, and ſome of them with brickbats *: This is to let the wet drain off freely from the mould of the beds. After this filling up with chalk, ſtones, and broken bricks, there is a vacancy in the pits about two feet deep below the ſurface of the flues; this vacancy I have filled to a level with the ſurface of the flues with vegetable or leaf mould; and in putting it in, it is gently preſſed, to prevent it from ſinking too much afterwards.

On the ſurface of the mould which the pits are filled with, under the middle of each light, and which is juſt in the centre of the mould in each pit, I make hills of mould in the ſame form as is commonly done on a dung bed. Theſe hills are to ſet the plants in; and are raiſed at firſt nearly cloſe to or within a few inches of the glaſs. Raiſing the mould at firſt pretty nigh the glaſs is neceſſary on account of the ſinking of it; for as the frames are ſet on bricks they cannot ſink, but mould newly put in is ſure to ſettle, and the meaſure of ſettlement will ever depend upon the lightneſs and texture of the mould with which the pits are filled. Therefore, theſe and ſuch-like matters muſt be left to the diſcretion of thoſe who are entruſted with the direction and management of the frames. When the bed is thus

* Either of theſe, or ſuch like, will do equally well.

finiſhed,

finiſhed, and ready for the reception of the plants, if the flues be ſtrewed over with mould, ſo that their ſurface be juſt covered, to a ſtranger it is altogether a deception, for in every reſpect it has the appearance of a dung bed.

The ſaſhes of the frames which I uſe are glazed in lead; but if any perſon who rears early cucumbers have lights which are not glazed in lead, but are ſlate glazed, the vacancies between the glaſs had beſt be filled up cloſe with putty, to prevent too much air from getting into the frames in the cold days in winter. The frames under my management are conſtantly kept in good repair, and painted over once every year. This method, I am clearly of opinion, is more profitable than if the frames were neglected for two or three years, and then have a thorough repair with two or three coats of paint. When frames are new painted, they ſhould be ſuffered to lie and ſweeten for ſome time, at leaſt for two or three weeks, or until the diſagreeable ſmell of the paint be ſomewhat leſſened.

Although the frames I uſe are of a very good ſize, yet if they were a little ſmaller or larger, they would anſwer the purpoſe very well. Therefore thoſe who intend to build a bed after my plan, have no occaſion to make new frames merely for the purpoſe, but they may get the bed built to fit the frames they are already in poſſeſſion of.

The common and general method of cultivating early cucumbers is the following: The ſeedling plants are raiſed nearly in the ſame way as I did mine in

in 1792, but few or none make uſe of a thermometer, nor is it abſolutely neceſſary ſo to do. About three weeks before the plants are ready for planting out for good, a quantity of dung is procured, and caſt up in a heap to heat, and let lie about a fortnight or three weeks, and during that time it is turned twice or thrice, and well worked. It is then made up into a bed of about four or five feet high, and the frames and lights ſet upon it. It is afterwards ſuffered to ſtand for a few days to ſettle, and until its violent heat be ſomewhat abated; and when it is thought to be in a fit ſtate for the plants to grow in, its ſurface is made level, and a hill of mould laid in juſt under the middle of each light, and when the mould gets warm the plants are ridged out in it.

After this, if the bed has become perfectly ſweet, and there be heat enough in it, and the weather prove fine, the plants will grow finely; but in the courſe of a few days the heat of the bed begins to decline, and perhaps the weather changes from fine, and becomes cold, wet, and gloomy; and in that caſe a lining of freſh dung to enliven the heat of the bed is undoubtedly required.

When this freſh lining is applied, it ſets the bed into a freſh fermentation, and very frequently gives too much bottom heat, and it even often happens that the heat becomes too great under the plants before a lining is applied; for the heat of a dung bed is changeable, and is raiſed and lowered by the changes of the weather; and every perſon knows how variable the weather is in this part of the world.

When

When the heat becomes too powerful for the roots to grow in, the plants will ſhow it by their ſick, weakly appearance; and if the mould on the ſurface of the bed under the plants be examined, it will be found of a gray colour: When this happens, it is called a burning heat.

The only methods that I have yet learned, or ever heard of, either for preventing or for curing this burning heat of the bed, are four. The firſt of theſe is, giving plenty of air; the ſecond is, making holes in the ſides of the bed; the third is, taking the burnt or over-heated mould out from under the roots of the plants, and putting freſh mould in its ſtead; and the fourth is, pouring water into the dung of the bed to quench its fiery heat.

The firſt of theſe methods is the moſt ſimple and eaſy to be put in practice, but it ſeldom anſwers the deſired end, for much air ſtarves the branches of the plants, while the great heat in the dung of the bed hinders the roots of the plants from making due progreſs.

The ſecond method, which is making holes in the ſides of the bed to leſſen the great heat of it, may be of ſome ſervice, but it is rather precarious. The heat paſſing off on the outſide of the bed certainly cools the bed; but by that means the air in the frames is liable to be made too cold, and it is not the heat of the air that is wanted to be leſſened, but the heat immediately under the hills of plants.

The third method is attended with more trouble than the two former, and its operations are attended but

but with little better conſequences; for the taking the mould out from under the plants diſturbs their roots, and, in a few days after, if the heat of the bed be not declined, it becomes too hot again, and the ſame work is again required. Thus with theſe three methods I have kept on from October till March, and during that time have paid great attention, and exerted all my ingenuity, yet have been but little forwarder with my plants than if I had not begun to ſow the ſeeds before the month of February; and this has not only been my caſe, but, to my certain knowledge, that of hundreds beſides.

The fourth and laſt method of keeping the burning heat of the bed under, is that of pouring water into the dung of the bed. This method is the beſt and moſt effectual of the four, but in its performance ſkill, care, and attention, are required; and it muſt be executed with ſuch nicety and circumſpection, that I freely confeſs I am not able to give ſuch inſtructions concerning it, as might at all be depended on. For if too much water be poured in, it chills the bed, and creates noxious vapours therein; and if too little water be poured in, the burning will increaſe; ſo that by running to extremes on either ſide, the plants are expoſed to danger, retarded in their growth, and perhaps attacked by inſects and by complicated diſeaſes, which, if not removed in a ſhort time, will bring them to an untimely end.

The effect which the linings have on dung beds cauſes their ſides to ſink, and that unevenly, eſpecially

ally if the dung of which the bed was made, was not thoroughly worked before it was put into the bed; and in ſinking, the bed is liable to rend and give way in its ſides, and therefore it is difficult to prevent the ſteam of the linings from penetrating into the frames among the plants.

In the winter, when the heat of the bed is much declined, it is a common practice to bore holes in the ſides of the bed with a ſtake. Theſe holes are to enable the heat of the linings to warm the bed properly; but as the dung of the bed is of a looſe texture, through theſe holes the ſteam of the linings is apt to find its way into the frames among the plants.

When the dung of the bed gets old and rotten, it ſtagnates, corrupts, and becomes putrid; therefore the vapours which ariſe from it when in ſuch a ſtate, cannot be of a healthy nouriſhing quality, but, on the contrary, are certainly unhealthy, and ſlowly poiſonous to the plants. And if the dung of the bed become dry and huſky, the vapours that ariſe out of it when in ſuch a ſtate are productive of no better conſequences.

It is well known that animals, which are fed upon ſweet wholeſome food, are the moſt wholeſome food for man. And no doubt but the fleſh of wholeſome animals may be rendered ſomewhat unwholeſome by the nature or quality of the food they are fed with.

Vegetables are, in many reſpects, ſimilar to animals, and therefore may undoubtedly be rendered ſomewhat unwholeſome to man by the nature of the food with which they are nouriſhed.

I ſhall not enter into a philoſophical diſquiſition of the food of plants, but ſhall only mention what I hinted before, that the food of the cucumber plant is contained in earth, water, heat, and air, and the ſweeter theſe elements are kept, from which the plants derive their ſuſtenance, the more wholeſome and palatable will their fruit be.

When I uſed to cultivate cucumbers on a dung bed, the fruit were ſometimes watery and ill-taſted; but ſince I began to cultivate them on a brick bed, the fruit have conſtantly been firm and well-flavoured; which is certainly occaſioned by the goodneſs and wholeſomeneſs of the food with which the plants are fed or nouriſhed.

The difference of climate, or temperature of the air, has a very great effect on plants of almoſt all ſorts. The different degree of heat is the great cauſe of theſe changes, and different degrees of moiſture undoubtedly aſſiſt it. The American and African plants, which are ſaid to be famous in medicine, when of the growth of their native ſoils, yet when they are removed and brought into our climate, though they grow, and even produce their flowers and ripen their fruit, which is the laſt perfection of a plant, when put to the trial, it is ſaid by ſkilful men, they have always been found to want their proper medicinal virtues.

Many plants and trees, though natives of another climate, will endure the open air with us, and grow in our gardens, yet loſe much of their ſtrength and become dwarfs in proportion to what they were in their

their proper climate. But leſs violent changes than theſe are able to produce the like effects, at leaſt in ſome degree; for the ſeveral parts of Europe are able in time to alter the qualities of the ſame plant, even while it grows natural in them.

The differences made by varieties of climates upon plants are not always confined to diſtance of place, but even in the ſame country the climate differs greatly in different years by means of accident; and more or leſs heat, and more or leſs moiſture, will do as much violence to plants ſometimes as change of place, which operates only by means of the ſame agents. The effect of different climates in changing the nature of things produced in them, is not confined to plants only, but the animal kingdom alſo ſhares in it.

A cucumber plant delights in ſweet wholeſome air; but if the air in which it grows be contaminated, unhealthy, or impure, the plant will not continue long in a healthy flouriſhing condition.

Whatever is diſagreeable to the ſmell becomes in time hurtful to the cucumber plant; therefore, whoever would wiſh to know if the air in a cucumber frame be of a healthy nature for the plants, ſhould ſmell to it.

All the materials of my newly-invented bed are clean and ſweet; and the flues being made perfectly cloſe, no tainted or bad-ſmelling air can get through them into the bed, ſo that it is of little or no concern whether the dung of the linings be ſweet or otherwiſe, or whether the linings be made of dung or of any thing

thing elſe, provided there be a ſufficient heat kept in them.

The bed is ſo conſtructed, that the coldeſt place in it is exactly in the centre of each pit, and from this centre the heat increaſes on each ſide to the linings where the heat begins. The plant being planted in this centre or coldeſt part of the bed, their roots can never be hurt by the heat; and as it is natural for the roots to ſpread themſelves horizontally, the heat, increaſing on each ſide gradually, is in every reſpect ſuitable for their increaſe and extenſion.

The heat in the centre of each pit, juſt where the plants are firſt planted, ſeldom riſes higher than to about 80 or 85 degrees, nor does it ever riſe higher in any part of the pits than about 96 or 97 degrees, nor do I believe it ever can be raiſed higher than that, without ſcorching the plants by top heat or heated air; whereas in a bed made of dung, the heat in the centre of the bed under the mould in which the plants are planted, frequently riſes to above 120 degrees, when, at the ſame time, the air in the frames can ſcarcely be kept up to a proper degree of heat: This frequently happens in cold weather in winter.

"The ſcorching heat of a hot-bed of horſe-dung, when too hot for plants, is equal to 85 degrees and more, and hereabout is probably the heat of blood in fevers.

"The due healthy heat of a hot-bed of horſe-dung in the fine mould, where the roots of thriving cucumber plants were in February, was equal to 56 degrees, which

which is nearly the boſom heat, and that for hatching of eggs. The heat of the air under the glaſs frame of this hot-bed was equal to 34 degrees, ſo the roots had 26 degrees more heat than the plants above ground: The heat of the open air was then 17 degrees *."

According to Dr. Hales the heat of the human blood in high fevers is above 130 degrees of Fahrenheit's thermometer; the boſom heat, or heat of the ſkin, is from 94 to 98 degrees; the heat of a hen hatching eggs is from 103 to 107 degrees. It appears that 60 degrees of Fahrenheit's thermometer is equal to about 34 of Dr. Hales's thermometer; hence we may infer, that the heat of Dr. Hales's cucumber bed ſtood nearly as follows: The heat of the mould in which the roots were growing 100 degrees, and the heat of the air in the frames 60 degrees. Now as the ſurface of the mould, which was heated to about 100 degrees, muſt be expoſed to the heat of the air in the frame, which was 40 degrees lower, I think it is but reaſonable to ſuppoſe that the heat of the dung under the mould muſt have been at leaſt 120 degrees.

I am inclined to think that Dr. Hales did not himſelf manage this cucumber bed; for, if he had, I think he would have favoured the public with an account of how long it continued in that due healthy ſtate, and what methods he took to keep it in that ſtate, and of the ſucceſs attending his labours with regard to the produce of the plants.

The dung for the linings of the bed of my invention requires no more working than what is neceſ-

* Hales's Statics, vol. i. p. 60.

ſary to bring it to and keep it in a proper degree of heat; and as ſoon as the heat riſes in the linings, it circulates in the flues, and warms every part of the bed; whereas the dung for making a common cucumber bed muſt be turned and worked, and lie, till, by fermentation, its rank qualities be evaporated, and its violent heat be ſomewhat diminiſhed.

In the courſe of the winter a dung bed ſinks ſo low that it becomes difficult ſometimes to get a proper heat raiſed in the linings; but my brick bed being always of the ſame height, ſuch difficulty can never happen.

The linings of my brick bed retain the heat longer than the linings of a dung bed do, and that becauſe the flues are conſtantly full of ſteam; but a dung bed having little or no vacuity for the retention of the ſteam, the ſteam of the linings of it is more immediately evaporated, and conſequently the heat of the linings is ſooner exhauſted than the heat of the linings of the brick bed.

To illuſtrate this a little farther, it may be obſerved that there is a certain quality in dung which is the cauſe of its heating. While this quality, or any part of it, remains in the dung, it retains the heat in ſome degree; but when that quality is totally exhauſted, the heat in the dung ceaſes.

There is another method beſides that of fermentation by which dung may be deprived of this quality; and that is, by being expoſed for ſome time to the ſun and air in ſpreading it thinly on the ground. In that ſtate the dung's heating quality will be evaporated,

porated, and were it to be thus expoſed, it would alſo loſe much of its vegetative powers. Hence it appears evident, that the ſteam, which undoubtedly contains the heating quality, being retained in the flues or cavities of the bed, and reverting to its firſt ſource, is the means of enabling the linings to keep the heat longer than they could do if there were no ſuch cavities in the bed.

In the cultivation of the cucumber in the ſummer, under hand or bell glaſſes, the following method is generally practiſed: The ſeeds are ſown ſome time about the middle of April in a cucumber or melon bed, and when they come up, they are potted out into ſmall pots, two or three plants in each pot, and are kept properly watered, and ſtopped at the firſt or ſecond joint. About the middle of May, a warm ſituation where the mould is very rich is pitched on, and a trench is dug out about two feet deep, three feet broad, and the length is proportioned according to the number of lights it is intended for. This trench is filled with good warm dung, and when the dung is come to its full heat, it is covered over with eight, ten, or twelve inches deep of rich mould. The glaſſes are then ſet upon it about three feet diſtant from each other, and when the mould gets warm under them, the plants are turned out of the pots with their balls whole, and plunged in the mould under the glaſſes, and a little water given them to ſettle the mould about their roots, the glaſſes ſet over them, and in fine days they are raiſed a little on one ſide to let the plants have the free air; and

as the weather gets warmer and warmer, air is given more plentifully to harden the plants, ſo that they may be able to bear the open air, and run from under the glaſſes.

When the plants begin to fill the glaſſes, they are trained out horizontally, and the glaſſes are ſet upon bricks or ſuch-like, to bear them from the plants. After this the plants require nothing more but to be ſupplied with water when the ſummer ſhowers are not ſufficient, and to ſtop them when they run too thin of branches, and thin them of leaves or branches when they are likely to become over-crowded.

In warm ſummers and in warm ſituations, by this mode of management the plants will bear plentifully for about two months, provided they be not attacked by inſects or weakened by diſeaſes.

It is to be ſeen in the following journal, that on the 22d of October 1792 I ſowed the ſeeds of the cucumber *, and ridged out the plants upon the 16th day of

* The cucumber plant may be kept on from year to year by cuttings. The method of ſticking them is this: Take a ſhoot which is juſt ready for ſtopping, cut it off juſt below the joint behind the joint before which the ſhoot ſhould have been ſtopped, then cut ſmooth the lower end of the ſhoot or cutting, and ſtick it into fine leaf or other rich mould about an inch deep, and give it plenty of heat, and ſhade it from the rays of the ſun till it be fairly ſtruck. By this method, as well as by that of laying, plants may readily be propagated.

Thoſe who are deſirous of having cucumbers early, had beſt ſow the ſeeds about the 20th of October; they may be ſown at any time of the year, but the ſpring and autumn are the beſt ſeaſons. Cucumber plants may be made to bear fruit plentifully from

of November. The heat of the bed was then ſcarcely ſtrong enough, nor did it become ſtrong enough till about the 27th; the plants therefore made but little progreſs from the time of their being ridged out till the month of December.

On the 2d of January 1793 I renewed the ſouth ſide lining, and on the 15th of the ſame month I renewed the north ſide lining. The renewal of the ſouth ſide lining was done in a proper time, but the lining of the north ſide ſhould have been deferred for a few days longer, for the weather proving cold

from about the middle of March till the middle of September, but from the middle of September till the middle of March their produce will be found ſmall.

Although leſs dung is required for a brick bed than for a dung bed, yet it is of little uſe to try to raiſe early cucumbers without a ſufficiency of dung. I have frequently heard complaints, and perhaps not without ſome degree of truth, by gentlemen's gardeners, eſpecially in the country, that they were much perplexed for want of dung, &c. and that they could have none but when captious ſtewards or directors of the huſbandry thought fit. Such matters often breed quarrels between the gardener and the bailiff, and it is ſometimes difficult for the gentleman to decide which is in fault. I ſhall only obſerve that no difficulty of that nature happens with me, becauſe I have the direction both of the buſineſs of the farm as well as that of the garden, and I pay equal attention to both; for it gives me pleaſure to ſee each proſper. The method therefore which I purſue with regard to the dung is this: I frequently take the littery dung from among the cow-cribs, and make linings for the melon and cucumber beds of it, and when it is rotten I have it carried to the fields for manure. I often prefer ſuch, eſpecially late in the ſpring and early in the ſummer, before horſe-dung, becauſe its heat is generally leſs violent and more durable.

and windy juſt after, the bed was for a few days rendered too cold, and when the lining came to its full ſtrength of heat, the flues were for a few days rendered rather too warm, and conſequently the plants received a ſmall check. Again it is to be ſeen that on the 20th of November 1792 I covered the flues thinly with mould, and from that time until the 28th of February 1793, the flues remained thinly covered. The reaſon of keeping the flues thus covered with mould during that time was merely to ſave a little labour of watering; for while the mould continues moiſt upon the flues, vapours ariſe therefrom, and when mould on the flues is wetted, it retains the moiſture longer than the tiles of the flues do. But it is the beſt way during the winter to keep the flues entirely bare of mould, and to water them as occaſion may require.

Except the above-mentioned, all the reſt of the management held forth in my journal will do, and will in future be a guide and directory to myſelf, ſo far as relates to the culture of the cucumber.

To thoſe who may think proper to uſe my journal as a help in the management of early cucumbers, I would recommend that they ſhould look to it about a week or ten days before, and as long after, the day of the month on which they want directions to go by. This is proper; becauſe, for inſtance, the work which I had done about the bed on January 15th, 1793, may require to be done on the 8th of January in the year 1794, or perhaps it ſhould be deferred till the 22d or thereabout, as the heat and goodneſs

goodneſs of the dung, and other unforeſeen circumſtances, may determine.

After the cucumber bed is ſet to work, heat and ſweet moiſture are the two principal agents required for promoting the growth and vigour of the plants; therefore, if there be a heat kept in the linings ſtrong enough to keep the heat in the centre of the pits of mould fluctuating between 80 and 90 degrees, cold water may be poured on the flues twice or thrice a week. There is no danger of creating damps or impure air in the frames by watering the flues; for the water is no ſooner poured on them, than it runs down their ſides, and paſſes clear off through the drains of the bed; conſequently water being poured upon the flues, gives only a momentary check to the heat of the frames; for the flues being at all times full of hot ſteam, when the watering is finiſhed, the heat quickly reſumes its former vivacity, and raiſes a warm vapour in the frames, well adapted for promoting vegetation, and for increaſing the growth and invigorating the plant in all its parts.

The mould round about the ſides of the pits cloſe againſt the inner ſides of the flues, ſhould be kept nearly on a level with the ſurface of the flues; and as it is the mould that joins to the flues which receives the firſt and greateſt heat from the linings, it ſhould continually be kept in a moiſt ſtate; for if the mould againſt the flues be ſuffered to become dry and huſky, air will be generated in the frames diſagreeable to the plants.

During the winter and ſpring, in the mornings, juſt when the frames are uncovered, I never wiſh to find the heat of the air in the bed among the plants lower than 70 nor higher than 80 degrees; and during the ſame time I never wiſh the heat of the mould in the centre of the pits about ſix inches below the ſurface lower than 80 nor higher than 90 degrees. It appears, therefore, that, during the winter and ſpring months, I wiſh the medium heat of the air in the frames to be 75 degrees, and the medium heat of the mould to be 85 degrees. I ſpeak now of artificial heat, for when the days are warm, and the ſun ſhines, the heat of the air in the frames is often raiſed to a much higher degree. Reckoning the heat derived from the ſun, the medium heat of the air in the frames may be about 80 degrees; and as the mould in the pits for two or three inches deep is more ſuſceptible of heat and cold than at a greater depth, we may compute its medium heat to be nearly about the ſame degree as that of the air.

A bed may be built and ſet to work immediately; the heat of the linings will dry the lime of the joints of the bricks. The evaporation in the frames, from the moiſt lime of the joints of the brick-work, has no bad effect on the plants; but when a bed is ſet to work before it be dry and ſteady, great care muſt be taken not to injure the brick-work in filling up the pits.

A Plan of a Cucumber Bed.

Published as the Act directs May 1 1791 by James St Paul

EXPLANATION OF THE PLAN.

a a Pits for the plants. See the method explained in page 72.

b b Two courſes of brick-work: One of them laid under the tiles which cover the flues, and the other laid above them.

c c The flues.

d d Four-inch brick-work carried up full of holes or apertures.

e e Brick on edge, carried up ſolid to the top of the flues.

f f Four-inch brick-work carried up ſolid to the top of the flues.

g Drain that carries off the water from the bed.

h h Apertures or holes which are all round the bed, and through which the ſteam and heat of the linings enter the flues to warm the air in the frames.

i i Small holes or drains; theſe are at the bottom of each pit, and are to drain the water from the mould of the pits.

k k South ſide of the frames on which the lights reſt.

l Light.

m m Two courſes of tiles which cover the flues, the ends of which extend to the outſide of the brick-work.

n n Foundation of the bed, which is under ground.

o End of the frames.

I have given the plan of a bed for ſix lights only, but a bed may be extended to any length or ſize required by the ſame model.

MANAGEMENT

OF THE

CUCUMBER PLANTS.

[*S. Th.* ſtands for Surface Thermometer. *P. Th.* for Plunged Thermometer. *Ther.* for Thermometer in the open air.—The Surface Thermometer ſtood nearly upright among the plants, and partly expoſed to the rays of the ſun.]

Wedneſday, October 17, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.
6	—	—	42	S. W. Clear, and a briſk wind.
8	—	—	44	S. W. Ditto.
10	—	—	48	S. W. Sunſhine.
12	—	—	53	S W. Windy, and ſome drops
2	—	—	54	S. W. Ditto. [of rain fall.
5	—	—	49	S. W. Cloudy, windy.
9	—	—	46	S. W. Ditto.

To-day I had a bed made up of hot dung for a two light frame; it was made about four feet and a half high, and the box and lights were ſet upon it.

Thurſday, October 18, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.
6	—	—	40	S. W. Clear and a briſk gale of
8	—	—	43	S. W. Ditto. [wind.
10	—	—	49	S. W. Clouds begin to ariſe.
12	—	—	51	S. W. Cloudy, and a briſk wind.
2	—	—	50	S. W. A light ſhower of rain.
4	—	—	48	S. W. Cloudy.
5	—	—	44	S. W. Clear, and but little wind.
9	—	—	38	S. W. Ditto.

The lights of the cucumber bed were kept cloſe ſhut down day and night.

Friday,

Friday, October 19, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.
6	—	—	32	S. W. Clear, frosty.
8	—	—	39	S. W. Ditto.
11	—	—	45	S. W. The sky is overcast.
12	—	—	50	S. W. Sunshine.
1	—	—	50	S. W. The sky is overcast.
2	—	—	49	S. W. The sun appears faintly.
4	—	—	44	S. W. It rains gently.
9	—	—	45	S. W. Cloudy.

The heat of the cucumber bed began to rise; a little air was given to it to let the steam pass off.

Saturday, October 20, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.
6	—	—	50	S. W. Cloudy, and a brisk wind.
10	—	—	53	S. Gloomy, the clouds look
12	—	—	55	S. Cloudy. [rainy.
2	—	—	58	S. It rains a little.
4	—	—	56	S. Ditto.
8	—	—	52	S. It has rained since 4 o'cl.

A strong heat is got up in the cucumber bed; air was continued at it day and night.

Sunday, October 21, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.
6	—	—	49	S. E. Clear, the sky red before
10	—	—	55	S. It rains. [sun-rise.
12	—	—	55	S. It has rained heavily since
2	—	—	56	S. Fair, gloomy. [10 o'cl.
5	—	—	54	S. Light clouds, nearly calm.
9	—	—	49	S. Ditto.

Air was continued at the cucumber frame day and night to let the steam pass off.

Monday, October 22, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.	
6	—	—	49	S. W.	Flying clouds.
10	—	—	57	S. W.	Windy, ſcuds of rain.
11	—	—	59	S. W.	Scattered clouds.
2	—	—	58	S. W.	Ditto.
5	—	—	55	S. W.	Showers of rain.
8	—	—	48	S. W.	Clear, and a briſk wind.

In the afternoon I ſowed cucumber ſeed in leaf mould in pans about three inches deep, covered it about half an inch thick, and ſet them on the ſurface of the bed. I then ſet a thermometer in the frame, and at 4 o'clock the mercury ſtood at 94. The lights were ſhut cloſe down in the evening for the night.

Tueſday, October 23, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.	
6	83	—	32	N. W.	Clear and froſty.
10	80	—	39	N.	Cloudy.
12	81	—	46	N.	Scattered clouds.
3	79	—	44	N.	Cloudy.
5	77	—	40	N.	Clouds in the horizon.
9	—	—	37	N.	Clear.

The cucumber frame got air at 6 o'clock in the morning, which was continued day and night.

Wedneſday,

Wednesday, October 24, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.
6	82	—	42	S. W. Clear, and a brisk gale of wind.
10	79	—	53	S. W. Scattered clouds.
12	79	—	55	S. W. Cloudy.
2	81	—	53	S. W. The sun shines faintly.
4	80	—	48	S. W. Thin clouds all over the sky.
5	78	—	46	S. W. Ditto.
9	—	—	42	S. W. Some clouds.

The plants begin to appear, the frame was covered up in the evening with single mats, and a little air was left at each light all night.

Thursday, October 25, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.
6	76	—	37	N. E. Foggy dull morning.
10	75	—	47	N. E. The sun glimpses.
12	76	—	49	N. E. Scattered great clouds.
2	71	—	48	N. E. Cloudy.
5	66	—	44	N. E. Ditto.
9	—	—	43	N. E. Ditto.

The frame was uncovered at six o'clock in the morning, and covered up in the evening with single mats; the surface of the bed was loosened with a dung-fork four or five inches deep; air was continued day and night.

Friday,

Friday, October 26, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.	
6	70	—	42	N. E.	Cloudy, and a briſk wind.
8	68	—	42	N. E.	Ditto.
10	69	—	43	N. E.	Some drops of rain fall.
12	71	—	44	N. E.	Ditto.
2	75	—	44	N. E.	Showery.
4	73	—	41	N. E.	Gloomy.
9	—	—	41	N. E.	Ditto.

The frame was uncovered in the morning, and covered in the evening with ſingle mats; air was continued day and night.

Saturday, October 27, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.	
6	79	—	43	E.	Cloudy, and a briſk wind.
8	75	—	48	S. E.	Ditto.
10	82	—	53	S. E.	Cloudy, nearly calm.
12	83	—	57	S. E.	Scattered ſmall clouds.
2	82	—	58	S.	Ditto.
4	78	—	52	S.	Ditto.
5	76	—	49	S.	Ditto.
9	—	—	47	S.	Light clouds.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with ſingle mats; air was continued day and night; the ſeed leaves of the plants are fairly expanded.

Sunday,

Sunday, October 28, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.	
6	76	—	50	S.	Cloudy, moiſt; there had been rain in the night.
9	77	—	55	S.	Cloudy, nearly calm.
10	78	—	58	S.	Hazy.
12	80	—	60	S.	Sunſhine.
2	82	—	59	S.	Clouds here and there.
4	78	—	57	S. W.	Ditto.
9	—	—	50	S. W.	Ditto.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with ſingle mats; air was continued day and night.

Monday, October 29, 1792.

Hours.	S. Th.	P. Th.	Ther.	Wind.	
6	—	—	50	S. W.	It rains lightly.
7	75	—	51	S. W.	Fair, cloudy.
10	76	—	56	S. W.	Ditto.
12	80	—	57	S. W.	Ditto.
2	79	—	58	S. W.	Sunſhine now and then.
4	77	—	57	S. W.	Ditto.
5	75	—	56	S. W.	Ditto.
9	—	—	48	S. W.	Clear.

The frames were uncovered at 7 o'clock in the morning, and covered up in the evening with ſingle mats; air was continued day and night.

Tueſday,

Tuesday, October 30, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	—	44	S.W.	Thin clouds cover the sky.
10	79	—	54	S.W.	It rains lightly.
12	78	—	55	S.W.	Cloudy.
3	76	—	54	S.W.	Ditto.
5	72	—	52	S.W.	Light showers.
9	—	—	47	S.W.	Cloudy.

The frames were uncovered about 6 o'clock in the morning, and covered in the evening with single mats; air was continued day and night. In the afternoon I potted out the plants in small pots, three plants in each; the surface of the bed was then loosened, and the pots of plants set on its surface.

Wednesday, October 31, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	82	—	50	S.W.	It rains.
10	83	—	53	S.W.	Fair, cloudy.
11	86	—	53	S.W.	Ditto.
12	88	—	54	S.W.	Sunshine.
1	89	—	54	S.W.	Ditto.
3	84	—	54	S.W.	Scattered clouds.
5	78	—	48	S.W.	Ditto.
8	—	—	44	S.W.	Clear, and a brisk wind.

The frames were uncovered in the morning, and covered up in the evening with single mats; air was continued day and night.

Thurſday, November 1, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	71	—	44	S.W. Light clouds, which are
10	80	—	50	S.W. Cloudy. [red in the eaſt.
1	74	—	51	S.W. Gloomy.
2	73	—	51	S.W. Ditto. [ſince 3 o'clock.
4	69	—	49	S.W. Windy; it has rained
5	68	—	49	S.W. It continues to rain.
9	—	—	44	S.W. Windy, and a ſmall rain.

The frame was uncovered at 7 o'clock in the morning, and covered up in the evening with double mats. The ſurface of the bed was looſened, and water poured into it; the plants were watered in the forenoon with water 75 degrees warm.

Friday, November 2, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	70	—	37	S.W. Clear, and a briſk gale of wind.
9	75	—	42	S.W. Sunſhine, nearly calm.
11	85	114	47	S.W. Ditto.
12	91	117	49	S.W. Ditto.
2	91	118	48	S.W. Ditto.
4	80	119	45	S.W. Clouds in the horizon.
9	—	—	43	S.W. Clouds here and there.

The frames were uncovered in the morning, and covered up in the evening with double mats. At 10 o'clock in the morning I plunged a thermometer in the ſurface of the bed among the pots of plants, and ſunk its bulb about ſix inches deep in the dung. Air was continued at the plants day and night.

Saturday, November 3, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	78	122	46	S.W. Light clouds cover the ſky.
10	86	122	52	S.W. Clear, and a briſk gale of
12	85	123	54	S.W. Sunſhine. [wind.
2	82	124	55	S.W. Ditto.
4	80	124	52	S.W. Clear, and nearly calm.
8	—	—	51	S.W. Cloudy.

The frame was uncovered in the morning about 7 o'clock, and covered up in the evening with double mats. The plants were watered in the morning with water about 80 degrees warm.

Sunday, November 4, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	74	121	40	S. E. Clear, and nearly calm.
10	82	122	49	S. Sunſhine.
12	84	123	53	S. Ditto.
2	84	124	54	S. Ditto.
3	78	124	53	S.W. Ditto.
5	76	124	51	S.W. Clouds here and there.
8	—	—	44	S.W. Light clouds.

The frame was uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night. The plants have their firſt rough leaves fairly expanded.

Monday, November 5, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	65	118	32	N.E.	Thick fog, white froſt.
10	76	118	38	N.E.	The ſun appears through the fog.
11	80	119	43	N.E.	Sunſhine.
12	92	121	48	N.E.	Ditto.
2	80	121	47	N.E.	Fog comes from the north-eaſt.
4	79	121	42	N.E.	Ditto.
9	—	—	37	N.E.	Ditto.

The frame was uncovered about 8 o'clock in the morning, and covered up in the evening with mats. Air was continued day and night.

Tueſday, November 6, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	62	115	29	S.W.	White froſt, and a thick fog, which has a diſagreeable ſmell.
10	70	115	37	W.	Foggy, nearly calm.
12	78	117	46	W.	Hazy.
2	76	118	46	N.	Very thick fog.
4	72	119	44	N.E.	Ditto.
6	—	—	44	N.E.	Ditto.
8	—	—	45	N.E.	The fog is more thin.

The frame was uncovered about 8 o'clock in the morning, and covered up in the evening with double mats. In the forenoon the ſurface of the bed was looſened ſeven or eight inches deep, and made level; the pots of plants were then ſet on the ſurface of the dung in hollows made with the hand, ſo that the roots of the plants might receive a greater degree of heat than that of the air in the frame, and yet be prevented from an over-heat. Air was continued night and day.

Wedneſday,

Wednesday, November 7, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	69	122	43	S.W. High thick clouds.
10	69	122	46	S.W. Ditto
12	67	122	48	S.W. Gloomy.
2	71	122	48	S.W. Ditto.
4	68	122	48	S.W. Ditto.
9	—	—	46	S.W. Cloudy.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night. At noon the plants were watered with water 76 degrees warm.

Thursday, November 8, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	67	120	46	S.W. Cloudy, calm.
8	66	120	47	S.W. Ditto.
10	68	119	49	S.W. Ditto.
12	75	119	53	S.W. Gloomy.
2	71	120	53	S.W. Ditto.
4	65	120	49	S.W. Ditto.
9	—	—	44	S.W. Cloudy.

The frame was uncovered a little before 8 in the morning, and covered up in the evening with double mats. Air was continued day and night.

Friday, November 9, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	80	121	41	S.	Gloomy.
9	76	121	49	S.	Cloudy, nearly calm.
10	75	121	53	S.	Ditto.
12	76	121	53	S.	Ditto.
2	75	121	52	S.	Ditto.
4	72	121	50	S.	Cloudy, wind briſk.
8	—	—	42	S.W.	Clear, nearly calm.

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night.

Saturday, November 10, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	70	119	47	S W.	Cloudy, and a briſk air
9	70	119	49	S.W.	Ditto. [of wind.
11	71	119	53	S.W.	Light clouds.
1	74	119	54	S.W.	The ſun ſhines faintly.
2	70	119	53	S.W.	Cloudy.
4	67	118	50	S.W.	Gloomy.
9	—	—	47	S.W.	Dark.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night.

Sunday,

Sunday, November 11, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	67	115	47	S.W.	Hazy thick atmoſphere.
8	66	115	48	S.W.	Ditto.
10	71	115	49	S.W.	Gloomy, ſome drops of
1	73	115	50	S.W.	Gloomy. [rain fall.
2	71	116	49	S.W.	Ditto.
4	70	116	47	S.W.	Ditto.
9	—	—	43	S.W.	Light clouds.

The frame was uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night.

Monday, November 12, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	77	116	35	S. E.	The ſky is covered with light ſtreaky clouds, which are red a good way up the horizon.
9	74	116	39	S. E.	Sunſhine.
10	81	116	44	S. E.	Ditto.
12	85	116	48	S. E.	Ditto.
2	74	116	48	S. E.	Clouds in the horizon.
7	—	—	41	S. E.	High wind, and ſome
9	—	—	42	S. E.	Ditto. [clouds.

The frame was uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night. The ſecond rough leaves of the plants are fairly expanded.

Tueſday, November 13, 1792.

Hours.	S.Th.	P Th.	Ther.	Wind.
6	—	—	47	S. E. High wind, and ſcuds of rain.
7	68	110	48	S. E. There is a rainbow in the north-weſt.
10	70	110	50	S. E. Flying clouds, windy.
12	74	110	51	S. Cloudy, and nearly calm.
4	68	110	50	S Clouds here and there.
7	—	—	44	S.W. Clear, and nearly calm.
8	—	—	45	S.W. A heavy rain.

The frame was uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night. To-day old mats were hung round about the ſides of the bed to keep it warm.

Having taken the laſt year's earth from off the bed, and out of the pits, about four inches below the ſurface of the flues, I had the flues bruſhed over with thick grout made of lime and water, to make the joints of the flues cloſe, to prevent the ſteam of the linings from getting into the frames. I then had the pits filled up on a level with the flues with freſh leaf earth, and preſſed it gently down to keep it from ſinking afterwards. I then made a hill of earth in the middle of each pit, raiſing each hill about eight or nine inches above the level of the flues; thoſe hills are deſigned to ſet the plants in. Having thus done, a lining of dung was made all round the bed, and it was made three feet wide at the foundation, and tapered up to about 28 inches at the top, and it

was

was raiſed near four feet high, and was made of ſtrong ſtinking wet dung which had lain for ſome time in a dung hole.

Wedneſday, November 14, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	70	111	44	S.W. High wind, and it rains.
9	69	111	43	S.W. Cloudy and windy.
10	73	111	45	S.W. Scattered clouds.
11	75	111	47	S.W. Scattered flying clouds,
1	70	111	50	S.W. Scuds of rain. [windy.
2	71	111	50	S W. Windy.
4	64	110	46	S.W. The wind is very high.
8	—	—	46	S.W. Clear and windy.

The frame was uncovered about 8 o'clock in the morning, and covered up in the evening, with about three inches thick of hay and mats. At 1 o'clock I watered the plants with water 78 degrees warm.

Thurſday, November 15, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	70	105	43	S.W. Cloudy, and a briſk gale of wind.
10	68	105	47	S.W. Flying clouds, windy.
12	68	105	48	S.W. Sunſhine, windy.
2	69	105	47	S.W. Ditto.
4	63	104	41	W. Clear, and a briſk gale of wind.

The frame was uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was continued day and night.

Friday,

Friday, November 16, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	65	103	35	W.	Strong gale of wind, and ſtreaky clouds, which are reddiſh in colour.
10	69	103	40	W.	Sunſhine, windy.
12	68	65	43	W.	Ditto.
4	64	65	41	W.	Windy, and flying clouds.

Between 10 and 11 o'clock I took nine pots of plants out of the ſeedling frame, and carried them to the fruiting frames, which were ſet a-going on Tueſday laſt, and I plunged one pot of plants in each hill. I alſo removed the thermometers from the ſeedling frame to the fruiting ones, and in the middle hill of the middle frame cloſe to the pot of plants I ſunk the bulb of one of the thermometers about ſix inches deep in the earth of the hill, and the other thermometer I ſet at the foot of the hill nearly upright, and reſted its bulb on the ſurface of the earth.

The frames were covered up in the evening with ſingle mats, and a little air left at each light all night.

Saturday, November 17, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	62	64	25	W.	Clear, and a ſharp froſt.
10	65	64	28	W.	Sunſhine.
1	79	72	36	W.	Ditto.
2	78	72	35	S.W.	Ditto.
4	67	71	31	S.W.	Clear and calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with ſingle mats.

mats. In the afternoon I turned the plants out of the pots with their balls whole, and I put three plants in each hill, and covered the balls with the earth about an inch thick up the ſtems of the plants. There was a great ſteam riſing out of the linings about the frames all the day.

Sunday, November 18, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	65	68	30	S.W. Thin clouds all over the
9	66	68	34	S.W. Ditto. [ſky.
10	68	68	40	S.W. Ditto.
1	72	70	43	S.W. Cloudy and nearly calm.
2	70	70	43	S.W. Ditto.
5	61	69	40	S.W. Cloudy, and a briſk wind.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with ſingle mats. Air was continued night and day.

Monday, November 19, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	72	72	46	S.W. Cloudy and windy.
10	68	71	46	S.W. The ſun ſhines faintly.
12	65	70	48	S.W. Sunſhine.
1	66	69	48	S.W. Ditto.
2	67	69	47	W. A ſhower of rain.
4	65	69	44	W. Cloudy and windy.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with ſingle mats. Air was continued day and night.

Tueſday,

Tueſday, November 20, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	66	68	28	S.W. Thin clouds; the ſky is red before the ſun.
10	66	68	33	S.W. Thin clouds.
1	75	71	39	S.W. The ſun ſhines faintly.
2	72	72	38	S.W. Cloudy, and nearly calm.
4	67	71	36	S.W. Ditto,
6	—	—	34	S.W. Thin clouds.

The frames were uncovered about 8 o'clock in the morning, and covered up about 4 o'clock in the evening with ſingle mats.

Wedneſday, November 21, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	64	67	47	S.W. Cloudy, and a briſk gale of wind.
10	65	67	50	S.W. Ditto.
12	66	67	51	S.W. Cloudy and windy.
1	63	67	52	S.W. Ditto.
2	63	67	51	S.W. Ditto.
5	—	—	49	S.W. Windy, and it rains.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with ſingle mats.

Thurſday, November 22, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	59	65	36	S.W. Cloudy and windy.
10	62	65	40	S.W. Ditto.
11	72	68	42	S.W. Sunſhine.
1	74	68	43	S.W. Ditto.
2	67	69	40	S.W. Cloudy and windy.
3	65	69	37	S.W. A heavy ſhower of hail, & high guſt of wind.

The frames were uncovered at 8 o'clock in the morning,

morning, and covered up in the evening with about two inches thick of hay and mats Air was given all day, and a little left at each light all night. I had all the flues covered about an inch thick with leaf earth, and a little laid all round againſt the inſides of the frames.

Friday, November 23, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	74	75	34	N.W. Thin clouds.
9	67	74	35	N.W. Clear in the weſt.
10	69	73	37	N.W. Cloudy, and a briſk wind.
12	69	72	41	N.W. Cloudy and windy.
3	64	72	41	N.W. Small ſhower of rain.
5	—	—	41	N.W. Ditto.
7	—	—	41	N. Showery.

The frames were uncovered at 7 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. There not being a good heat in the linings, to-day I had them turned, and ſhaken well, and laid up light, ſo that a better heat might ariſe in them. I found the dung wet, and a very bad ſmell in it.

Saturday, November 24, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	70	74	32	N. E. Some clouds, near calm.
9	69	74	36	N. E. Cloudy.
10	67	73	38	N. E. Ditto.
1	65	72	41	N. E. Ditto.
3	63	71	40	N. E. Ditto, and a cold wind.
4	61	71	40	N. E. Ditto.
9	—	—	39	N. E. Thin clouds.

The frames were uncovered about 8 o'clock in the morning,

morning, and covered up in the evening with hay and mats; a little air was given in the day-time, but the lights were ſhut cloſe down in the evening for the night.

Sunday, November 25, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	39	N. E. Thin clouds, and a briſk
8	72	75	39	N. E. Ditto [gale of wind.
10	68	74	42	N. E. Ditto.
3	66	73	42	N. E. Ditto.
4	65	73	41	N. E. Ditto.
7	—	—	42	N. E. Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats; but little air was given in the day-time, and the lights were ſhut cloſe down all night.

Monday, November 26, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	35	N. E. Cloudy, and a briſk wind.
8	75	78	37	N. E. Gloomy.
10	69	76	38	N. E. Ditto.
12	66	75	39	N. E. Ditto.
2	66	75	39	N. E. Ditto.
4	65	74	40	N. E. Some drops of rain fall.

The frames were uncovered about 8 o'clock in the morning, and covered in the evening with about three inches thick of hay and mats. The linings, being ſunk, were raiſed with freſh long dung.

Tueſday,

Tueſday, November 27, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	82	81	39	N. E. Cloudy, gloomy.
10	71	78	40	N. E. Ditto.
12	71	78	41	N. E. Ditto.
2	70	77	42	N. E. Ditto.
4	67	77	40	N. E. Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. About 11 o'clock I gave the plants a little water 75 degrees warm.

Wedneſday, November 28, 1792.

Hours.	S Th.	P.Th.	Ther.	Wind.	
7	82	82	35	E.	Cloudy, and near calm.
8	82	82	35	E.	Ditto.
10	72	81	36	E.	Ditto.
12	70	79	38	E.	Ditto.
2	67	77	37	E.	Some drops of rain fall.
4	66	76	36	E.	Hazy.
6	—	—	34	E.	A ſmall rain.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. To-day there was a great heat in the linings, and a great ſteam ariſing out of them. I had ſeveral tubs of water poured on them, and moſt was given to thoſe parts where the heat was greateſt. A little air was given in the day-time, but the lights were ſhut cloſe all night.

Thurſday,

Thurſday, November 29, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
8	80	83	29	E. Clear, and near calm.
9	77	82	30	E. Ditto.
10	80	82	33	E. Sunſhine.
11	84	83	35	E. Ditto.
12	87	84	38	E. Ditto.
1	90	85	39	E. Ditto.
3	82	85	36	E. Ditto.
4	75	85	32	E. Clear and calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats; air was given in the day-time, and a little left at each light all night.

Friday, November 30, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	35	S. E. Foggy and near calm.
8	82	85	35	S. E. Ditto.
10	69	84	35	S. E. Ditto.
12	68	80	36	S. E. Ditto.
2	68	80	35	S. E. Ditto.
4	66	80	35	S. E. Ditto.
9	—	—	29	S. E. Foggy and dark.

The frames were uncovered about 8 o'clock in the morning, and covered at 4 in the evening with hay and mats. The linings, being ſunk, were raiſed; air was given in the day-time, and a little left at each light all night.

Saturday,

Saturday, December 1, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
8	68	77	32	S.E. Cloudy, and a briſk wind.
10	66	77	34	S.E. Ditto.
12	64	76	32	S.E. Ditto.
2	64	76	32	S.E. Ditto.
4	62	77	31	S.E. Gloomy.
6	—	—	30	S.E. Cloudy.

The frames were uncovered between 8 and 9 o'clock in the morning, and covered up about 4 in the evening with about three inches thick of hay and mats. Air was continued day and night.

Sunday, December 2, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
8	70	80	34	N.E. Cloudy, and a briſk gale
10	66	80	35	N.E. Ditto. [of wind.
12	65	81	36	N.E. Ditto.
2	64	81	36	N.E. Ditto.
4	63	81	35	N.E. Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. The plunged thermometer is now ſunk in the pit about four inches from the north ſide flue, and its bulb is about ſix inches below the ſurface of the earth.

Monday, December 3, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	—	—	33	N. E.	Thick foggy clouds, near-
8	70	84	34	N. E.	Ditto. [ly calm.
10	70	84	35	W.	Ditto.
12	64	83	34	W.	Cloudy, and a briſk wind.
2	60	82	32	W.	Ditto.
4	59	82	30	W.	Ditto.
6	—	—	28	W.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was given in the day-time, but the lights were ſhut cloſe down all night.

Tueſday, December 4, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	76	85	35	S.W.	Foggy, and nearly calm.
9	71	85	36	S.W.	Ditto.
10	70	85	37	S.W.	Cloudy, and a briſk wind.
12	67	85	42	S.W.	Ditto.
3	63	84	42	S.W.	Ditto.
4	60	84	44	S.W.	It rains gently. [high.
8	—	—	45	S.W.	It rains, and the wind is

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats.

Wedneſday,

Wedneſday, December 5, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	50	W. Cloudy, windy; there had been rain in the night.
8	72	84	50	W. Cloudy and windy.
10	66	84	50	W. Ditto.
12	65	84	51	W. Ditto.
2	63	83	52	W. Ditto.
4	64	83	52	W. Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was given in the day-time, but the lights were ſhut cloſe down all night.

Thurſday, December 6, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	42	S.E. Cloudy, and but little wind.
8	83	89	43	S.W. Ditto.
10	69	87	46	S.W. Cloudy and windy.
12	67	86	48	S.W. Scattered clouds, windy.
2	63	86	48	S.W. Cloudy and windy.
4	65	85	47	S.W. Ditto.
8	—	—	44	S.W. Clear and windy.

The frames were uncovered between 8 and 9 o'clock in the morning, and covered up about 4 in the evening with about three inches thick of hay and mats. The linings, being ſunk, were raiſed with freſh dung. Air was admitted all day, and a little left at each light all night.

Friday, December 7, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	—	—	35	N.W.	Windy, and ſome clouds.
8	70	86	36	N.W.	Ditto.
12	74	86	37	N.W.	Sunſhine.
2	69	86	36	N.W.	Ditto.
4	64	86	31	N.W.	Clear, and a briſk wind.
7	—	—	27	N.W.	Clear, and nearly calm.

The frames were uncovered between 8 and 9 o'clock in the morning, and covered up about 4 o'clock in the evening with hay and mats. The linings were examined, and put cloſe to the ſides of the frames. The lights were ſhut cloſe down for about two hours in the middle of the day. A little air was left at each light all night. To-day I went over the plants and ſtopped them, and with my hand I ſtirred the mould on the flues, and alſo about the foot of the hills all round about.

Saturday, December 8, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	27	W.	Clear, calm; a little hail lies on the earth, which had fallen in the night.
7	—	—	26	W.	Ditto.
8	76	88	27	W.	Clear, and nearly calm.
9	72	88	28	W.	Ditto.
10	74	88	30	W.	Sunſhine.
12	75	88	35	S.W.	Ditto.
3	76	88	34	S W.	Ditto.
4	69	88	32	S.W.	Streaky clouds.
9	—	—	35	S.W.	Ditto.

The frames were uncovered about 8 o'clock in the morning,

morning, and covered up about 4 in the evening with about two inches thick of hay and mats. Air was given all day, and a little left at each light during the night.

Sunday, December 9, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	39	W. Cloudy, and a high wind.
9	72	89	43	W. Ditto.
10	70	89	45	W. Ditto.
11	67	88	46	W. Ditto.
1	64	87	47	W. Ditto.
3	67	87	47	W. Some drops of rain fall.
4	—	—	47	W. A ſmall drifting rain.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with hay and mats. The lights were ſhut cloſe down about 1 o'clock, and were let remain ſo all night.

Monday, December 10, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	49	W. Windy and cloudy.
8	80	93	50	W. Ditto.
10	70	92	51	W. Ditto.
12	67	91	52	W. High wind, and light clouds.
2	65	90	52	W. Ditto.
4	63	90	51	W. Ditto.
8	—	—	49	W. Clear and windy.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. To-day I went over the plants, and picked up the weeds that were growing among them, and ſtirred with my hand

the earth on the flues. The linings were examined, and put close to the sides of the frames.

Tuesday, December 11, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	41	W. Clear, and a strong gale of wind.
7	—	—	40	W. The wind is fallen a little.
8	72	91	41	W. Streaky clouds.
10	69	91	43	W. The sun glimmers.
12	68	90	44	W. Cloudy and windy.
2	63	89	42	W. The sun shines faintly.
4	62	88	40	W. Clear and windy.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. A little air was continued at each light day and night.

Wednesday, December 12, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	31	W. Streaky clouds, and but little wind.
8	78	92	32	W. The sun appears faintly.
10	69	91	35	W. Ditto.
12	68	90	36	N.W. Cloudy, and a cold wind.
3	60	88	36	N.W. Ditto.
4	62	88	36	N.W. Ditto.
7	—	—	36	N.W. It rains.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. About noon I got water warmed to about 80 degrees, and therewith I watered those parts of the flues that appeared dry, and poured some of it against

againſt the ſides of the frames all round. I then laid a little more earth on the flues cloſe againſt the ſides of the frames.

Thurſday, December 13, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	39	N.W. It rains gently.
9	74	90	36	N. E. Ditto.
10	68	89	36	N. E. Ditto.
12	68	88	37	N. E. A drizzling rain.
2	67	88	37	N. E. Ditto.
4	65	87	36	N. E. Ditto.

The frames were uncovered a little before 9 o'clock in the morning, and covered up in the evening with hay and mats. The linings, being ſunk, were raiſed. Air was given day and night.

Friday, December 14, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	36	N.W. Cloudy and windy.
9	77	90	40	N.W. Ditto.
10	70	90	44	N.W. Ditto.
12	74	90	49	N.W. Ditto.
2	72	90	48	N.W. Ditto.
4	70	89	47	N.W. Ditto.
7	—	—	44	N.W. Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up about 4 in the evening with about three inches thick of hay and mats. In the forenoon I went over the plants, and ſtopped them, and picked the weeds out of the mould; but little air was given in the day-time, and in the evening the lights were ſhut cloſe down for the night.

Saturday, December 15, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	—	—	41	W.	Cloudy, and a briſk gale of
8	85	94	42	W.	Ditto. [wind.
10	73	92	44	W.	The ſun glimpſes.
11	71	90	46	W.	Cloudy.
1	73	89	48	W.	Ditto.
3	69	89	47	W.	Ditto.
4	68	89	47	W.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was given all day, and the lights were ſhut down in the evening for the night.

Sunday, December 16, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	—	—	38	S.E.	Thick clouds, near calm.
8	88	95	38	E.	Ditto.
10	74	94	40	E.	Ditto.
11	73	94	41	E.	Gloomy.
1	72	93	43	E.	Ditto.
3	70	92	42	E.	Ditto.
4	68	91	41	E.	Ditto.

The frames were uncovered between 8 and 9 o'clock in the morning, and covered up in the evening with hay and mats. Air was given in the middle of the day, but none was left all night.

Monday,

Monday, December 17, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	40	S.W. Thin clouds, nearly calm.
9	84	94	41	S.W. Ditto.
10	74	93	42	S.W. Ditto.
12	70	91	45	S.W. Cloudy, and a briſk wind.
2	65	89	45	S.W. Ditto.
4	63	89	43	S.W. Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up about 4 in the evening with four inches thick of hay and mats. To-day I watered the flues, and poured ſome water all round againſt the ſides of the frames to waſh and ſweeten them; the water that I uſed was about 80 degrees warm. The linings, being ſunk, were raiſed with freſh dung. Air was given in the day-time, and a little left at each light during the night.

Tueſday, December 18, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	45	S.W. Flying clouds and ſtanding ones above them, and which are of a reddiſh colour.
9	77	90	46	S.W. Cloudy, and a briſk wind.
10	70	90	48	S.W. Cloudy and windy.
12	67	89	50	S.W. Ditto.
2	66	89	51	S.W. Ditto.
4	65	88	52	S.W. Ditto.
8	—	—	50	S.W. High wind, and cloudy.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with hay and mats. Air was admitted in the day-time, but the lights were ſhut cloſe down all night.

Wedneſday,

Wedneſday, December 19, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	49	S.W.	Clear, and a high wind.
8	—	—	47	S.W.	Some clouds, windy.
9	81	93	48	S.W.	Ditto.
10	67	92	49	S.W.	Ditto.
12	73	91	48	S.W.	Sunſhine, windy.
2	69	90	47	W.	Ditto.
4	67	90	45	W.	Windy, and ſome clouds.

The frames were uncovered about 9 o'clock in the morning, and covered up at 4 in the evening with about four inches thick of hay and mats. Air was continued all day, and a little left at each light all night. The linings were examined, and put cloſe to the ſides of the frames.

Thurſday, December 20, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	—	—	47	S.W.	Cloudy, and a high wind.
9	70	90	49	S.W.	Ditto.
10	67	90	51	S.W.	Ditto.
12	66	89	52	S.W.	There is a ſmall drifting
2	67	88	48	S.W.	Squally ſhowers. [rain.
4	65	88	47	S.W.	Windy and cloudy.

The frames were uncovered at 9 o'clock in the morning, and covered up at 4 in the evening with about three inches thick of hay and mats. The linings, being ſunk, were raiſed with freſh hot dung. Air was given day and night.

Friday,

Friday, December 21, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	W.	Clear and windy.
9	58	85	35	W.	Ditto.
10	59	84	36	W.	Sunſhine, and a high wind.
12	65	85	38	W.	Ditto.
4	66	86	37	W.	Cloudy and windy.
9	—	—	32	W.	Clear and windy.

The frames were uncovered about 9 o'clock in the morning, and covered up about 4 in the evening with hay and mats. Air was continued all the day, but the lights were ſhut cloſe down in the evening for the night. The plants were gone over, and ſtopped, and the weeds picked out. The plants in the weſt frame are the beſt, and they ſhow their fruit very ſtrong.

Saturday, December 22, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	—	—	42	S.W.	Cloudy and windy.
9	80	93	42	S.W.	Ditto.
10	72	92	43	S.W.	Ditto.
12	67	90	42	S.W.	Cloudy, and a high wind.
2	64	90	40	S.W.	A heavy ſhower of rain.
4	60	89	38	S.W.	Showery, and a high wind.
6	—	—	36	S.W.	Clear, the wind is high.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. The linings, being ſunk, were raiſed with freſh dung juſt come out of the ſtables. Air was admitted in the day-time, and a little left at each light during the night.

Sunday,

Sunday, December 23, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	—	—	32	N.W.	Clear, and a ſtrong gale
9	72	90	31	N.W.	Ditto. [of wind.
10	69	90	31	N.W.	Sunſhine, windy.
11	74	90	30	N.W.	Ditto.
1	77	90	31	N.W.	Some thin clouds.
3	67	89	29	N.W.	Cloudy, windy, cold.
4	68	89	28	N.W.	Ditto.
6	—	—	27	N.W.	Ditto.
9	—	—	26	N.W.	Ditto.

The frames were uncovered between 9 and 10 o'clock in the morning, and covered up in the evening with hay and mats.

Monday, December 24, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	29	N.W.	Cloudy, and a briſk gale
8	—	—	28	N.W.	Ditto. [of wind.
9	77	92	29	N.W.	Ditto.
10	69	91	30	N.W.	The wind is fallen,
12	50	87	30	W.	The ſun glimmers.
2	63	87	31	W.	Thin clouds, near calm.
4	62	87	29	W.	Clear, and nearly calm.
8	—	—	26	W.	Thin clouds.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about five inches thick of hay and mats.

About noon I went over the frames, and with my hand I ſtirred the earth on the flues, and where I found them very dry, there I ſtrewed a little freſh moiſt mould. Air was left at each light during the night.

Tueſday,

Tuesday, December 25, 1792.

Hours	S.Th.	P.Th.	Ther.	Wind.
6	—	—	29	S.W. Clear, and nearly calm. A shower of snow had fallen in the night.
7	—	—	28	S.W. Clear, and nearly calm.
9	78	92	29	S.W. Sunshine.
10	74	91	29	S.W. Ditto.
12	75	91	34	S W. Thin clouds.
2	71	90	35	S.W. Cloudy, and nearly calm.
4	71	90	32	S.W. Ditto.
6	—	—	32	S.W. Ditto.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with hay four inches thick, and mats. Some air was admitted in the day-time, and a little left all the night.

Wednesday, December 26, 1792.

Hours.	S Th.	P.Th.	Ther.	Wind.
6	—	—	38	W. Cloudy, and a brisk wind; there had been rain in the night.
9	65	89	34	W. Gloomy.
10	64	89	33	N.W. Showers of sleet.
12	63	88	32	N.W. A heavy fall of wet snow.
2	59	87	31	N.W. The snow continues to
3	58	87	30	N.W. Ditto. [fall heavily.
8	—	—	32	N.W. Windy, and some rain falls, and the snow is nearly melted.

The frames were uncovered about 9 o'clock in the morning, and covered up a little past 3 o'clock in the afternoon with about five inches thick of hay and mats.

mats. The lights were kept close shut down all the day, and remained so during the night.

Thursday, December 27, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	32	N.W. Cloudy, and but little wind.
9	80	92	33	N.W. Cloudy, and nearly calm.
10	69	91	34	N.W. Ditto.
12	70	90	36	N.W. Ditto.
2	70	90	35	N.W. Clouds here and there.
4	68	90	33	N.W. Clear, and a brisk wind.
7	—	—	28	N.W. Ditto.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. Air was admitted at 9 o'clock, and continued all day, and a little left all night. To-day I laid some earth round the hills, and the tops of them I covered with earth about an inch thick, and made it close to the stems of the plants. I then stopped the plants, and laid their vines out regular, and fixed them down to the hills with pegs.

Friday, December 28, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	30	W. Clear, and a brisk wind.
9	71	90	33	W. Ditto.
10	67	89	34	W. Sunshine.
12	70	89	36	W. Ditto.
2	68	88	38	N.W. Flying clouds.
4	64	88	37	N.W. Ditto.
8	—	—	34	N.W. There is a circle about the moon.

The frames were uncovered about 9 o'clock in the morning,

morning, and covered up at 4 in the evening with hay and mats. The linings, being ſunk, were raiſed with freſh dung. Air was admitted day and night.

Saturday, December 29, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	35	S. Cloudy; there had been rain in the night.
9	76	92	38	S.W. Cloudy.
10	71	91	39	S.W. Ditto.
12	73	90	45	S.W. Gloomy.
2	71	90	46	S.W. Ditto.
4	69	89	45	S.W. Ditto.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. In the afternoon a layer of freſh dung was laid on the linings. Air was continued at each light day and night.

Sunday, December 30, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	44	N.W. It rains.
9	76	93	42	N.W. Ditto.
10	71	92	43	N.W. Fair, cloudy.
1	77	92	43	W. Sunſhine.
2	75	92	42	W. Cloudy.
4	70	92	39	W. Clouds here and there.
8	—	—	30	W. Clear, and near calm.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with hay and mats.

Monday,

Monday, December 31, 1792.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	23	W.	Clear and calm.
7	—	—	24	W.	Ditto.
8	—	—	22	W.	Clear, and a briſk air of
9	80	94	24	W.	Ditto. [wind.
10	72	93	24	W.	Thin clouds cover the ſky.
12	75	93	28	W.	Sunſhine.
1	72	92	29	W.	A thick fog.
2	69	91	28	W.	Ditto.
4	65	91	27	W.	Ditto.
8	—	—	21	W.	The thick fog continues, and it has a bad ſmell.

The frames were uncovered about 9 o'clock in the morning, and covered up at 4 in the evening with about five inches thick of hay and mats. To-day I went over the plants, and ſtopped them, and nipped off ſome of the male bloſſoms where they were in cluſters. To-day I had ſome dung put together in a heap to heat, to make a lining for the ſouth ſide of the bed. But little air was given in the day-time, and the lights were ſhut cloſe down all night.

Tueſday, January 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	30	S.E.	Cloudy, and a briſk wind.
9	80	94	31	S.E.	Ditto.
10	71	93	34	S.	Ditto.
12	63	91	34	S.	It rains a little.
2	63	90	33	S.	Fair and cloudy.
4	60	89	33	S.	Flying thick clouds, but [little wind.
10	—	—	32	S.E.	Cloudy.

The frames were uncovered about 9 o'clock in the morning, and covered up about 4 in the evening with five

ſive inches thick of hay and mats. Air was admitted in the day-time, and a little left at each light during the night.

Wedneſday, January 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	32	N.W.	Cloudy, there had been rain in the night; the air is full of moiſture.
9	74	93	31	N.W.	Foggy, and ſnow falls.
10	72	93	31	N.W.	Ditto.
12	70	91	32	N.W.	Cloudy, and a briſk wind.
2	67	90	32	N.W.	Cloudy, and nearly calm.
4	66	89	34	N.W.	Ditto.
9	—	—	32	N. E.	Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about five inches thick of hay and mats. To-day I had a freſh lining put to the ſouth ſide of the bed, in doing which, I had the freſh dung that was on the top of the old lining laid aſide, and all the exhauſted dung taken away; and the dung that had been on the top of the lining, and was not exhauſted, that I had worked into the foundation of the new lining, and then had freſh dung laid above it. The lining was made about three feet wide at the foundation, and tapered up to about twenty-eight inches at the top.

Thurſday, January 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	27	W. A thick fog.
9	76	89	27	W. Ditto.
10	70	88	28	W. Ditto.
12	67	87	30	W. Ditto.
4	68	87	31	W. Ditto.
8	—	—	30	W. Clear and calm.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. Air was continued day and night. The lining that was made up yeſterday, being ſunk, was raiſed with freſh dung. I went over the plants, and ſtopped them, and picked ſome male bloſſoms off.

Friday, January 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	29	E. Cloudy, and a briſk wind.
9	76	92	29	E. Heavy clouds come from the eaſt.
10	70	91	30	E. Cloudy, and but little wind.
12	68	90	33	E. Ditto.
2	64	90	32	E. Ditto.
3	63	90	30	E. Ditto.
4	62	89	28	E. Ditto.
8	—	—	24	E. Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up about 4 in the evening with four inches thick of hay and mats. The linings were examined, and put cloſe to the ſides of the frames, and the ſouth ſide lining, being ſunk, was raiſed. A great ſteam kept riſing out of it all day.

Saturday,

Saturday, January 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	29	S.	Cloudy and windy.
9	70	90	32	S.	Ditto.
10	63	90	33	S.	Ditto.
12	67	90	35	S.	It rains.
2	69	90	36	S.W.	Ditto.
4	67	90	38	S.W.	Ditto.
7	—	—	38	S.W.	Clear, and a briſk wind.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with three inches thick of hay and mats. Air was admitted in the day-time, and a little left at each light during the night.

Sunday, January 6, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	30	W.	Clear, and a briſk wind.
9	77	94	31	W.	Ditto.
10	71	94	32	W.	Ditto.
11	73	94	34	W.	Sunſhine.
12	76	94	38	W.	Scattered clouds.
2	76	94	37	N.W.	Sunſhine.
4	70	93	34	N.W.	Clear, and a briſk wind.
9	—	—	27	N.W.	Clear, and near calm.

The frames were uncovered about 9 o'clock in the morning, and covered up about 4 in the evening with five inches thick of hay and mats. Air was given in the day-time, but the lights were ſhut cloſe down all night.

Monday, January 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
5	—	—	22	W. Clear and calm.
8	—	—	23	W. The ſky is overcaſt with thin
9	82	97	26	W. Thin clouds. [clouds.
10	74	96	33	W. Ditto.
12	68	95	38	S. A ſprinkling of rain.
2	68	94	37	S. Cloudy and windy.
4	67	94	37	S. Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. Air was admitted at 9 o'clock, and continued all day, and ſome left all night. The linings were raiſed with freſh dung. In the afternoon I went over the plants, and ſtopped them, and thinned out ſome of the oldeſt leaves, and pegged down the ſhoots of the plants, and picked off the dead male bloſſoms.

Tueſday, January 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	46	S.W. It rains, and there had been a great deal of rain in the night.
8	—	—	44	S.W. Fair and cloudy.
9	78	95	45	S.W. Scattered clouds, and a
10	74	95	46	S.W. Ditto. [briſk wind.
12	75	95	45	N.W. Ditto.
1	76	95	44	N.W. Sunſhine.
2	75	95	44	N.W. Ditto.
4	70	94	40	N.W. Clear, and a briſk wind.
7	—	—	32	N.W. Ditto.

The frames were uncovered a little before 9 o'clock in

in the morning, and covered up in the evening with about three inches thick of hay and mats. Air was admitted day and night.

Wedneſday, January 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	26	N.W. Clear, and nearly calm.
9	80	96	28	N.W. Ditto.
10	75	96	30	N.W. Sunſhine.
11	82	96	33	N.W. Ditto.
1	82	96	36	N.W. Ditto.
2	82	97	37	S. E. The ſun ſhines faintly.
4	75	97	35	S. E. Thin clouds cover the
7	—	—	34	S. E. Ditto. [ſky.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. Air was continued all the day, and a little left at each light during the night. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, and ſet ſome fruit that were in bloſſom. The linings were examined, and put cloſe to the ſides of the frames.

Thurſday, January 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	37	S. Windy, and thick flying clouds.
9	70	95	40	S. Ditto, and a ſmall rain.
10	68	95	42	S. Ditto. [clouds.
12	67	95	46	S. Fair, and flying great
2	69	95	48	S.W. Ditto.
4	67	95	46	S.W. Clear, and a briſk wind.
7	—	—	42	S.W. Ditto.

The frames were uncovered at 9 o'clock in the

morning, and covered up at 4 in the evening with about two inches thick of hay and mats. Air was continued day and night.

Friday, January 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	40	S.W.	Cloudy; there had been rain in the night.
9	75	96	42	S.W.	Cloudy, and a briſk gale
10	74	95	43	S.W.	Sunſhine. [of wind.
12	60	80	43	S.W.	Clouds here and there.
2	56	74	43	S.W.	Sunſhine.
4	54	75	42	S.	It begins to rain, and the wind is high. [rain.
5	—	—	42	S.	High wind, and ſome
7	—	—.	42	S.	Fair, cloudy, windy.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. To-day I laid ſome earth round each hill, and covered the ſurface of the hills among the plants about half an inch thick with fine ſifted leaf earth. I then ſtopped the plants, thinned their leaves, and laid the ſhoots out regular on the hills, and pegged them down to the earth with little wooden pegs, and I removed the plunged thermometer, and ſet it in the hill about ten inches north from the ſtems of the plants, with its bulb ſix inches below the ſurface of the earth; I made the earth cloſe to its tube to prevent the external air in the bed from penetrating too quickly to the bulb; I ſet the other thermometer by it with its bulb on the ſurface of the earth of the hill, and I ſtuck a ſtick into

into the hill for the ſurface thermometer to lean againſt.

Saturday, January 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	36	S.	Cloudy, and a high wind; there had much rain in the night.
8	—	—	38	S.W.	It rains, and the wind is high.
9	69	80	39	S.W.	It rains heavily, gloomy.
10	64	80	38	S.W.	Fair, cloudy.
12	68	80	40	S.W.	Sunſhine, windy.
2	70	80	40	S.W.	Ditto.
4	67	80	38	S.W.	Clear, windy.
8	—	—	35	W.	Cloudy, windy.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. The linings were raiſed with freſh dung.

Sunday, January 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	31	S.W.	Clear, and near calm.
8	—	—	32	S.W.	Clouds here and there.
9	75	84	33	S.W.	Sunſhine.
10	72	84	35	S.	Ditto.
11	75	85	36	S.	Ditto.
1	85	87	42	S.	Ditto.
2	85	87	42	S.	Clouds here and there.
4	73	86	38	S.	Ditto.
8	—	—	34	S. E.	Clear, and a briſk wind.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with hay and mats.

Monday, January 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	32	E. Foggy.
9	78	87	35	E. Showery.
10	70	86	36	N.E. Ditto.
12	64	84	38	N.E. Cloudy, and a briſk wind.
2	67	83	38	N.E. Ditto.
4	65	83	38	N.E. Ditto.
7	—	—	33	N.E. Clear, and a briſk gale of wind.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. Air was given day and night. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, and laid the vines out regular.

Tueſday, January 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	32	N.E. Cloudy and windy.
8	—	—	33	N.E. Ditto.
9	80	88	33	N.E. Ditto.
10	68	86	34	N.E. Ditto.
12	65	85	35	N.E. A little ſnow falls.
2	60	83	34	N.E. Ditto.
4	57	81	33	N.E. Windy, cloudy, gloomy.
7	—	—	32	N.E. Windy.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. Air was continued day and night. To-day I had the freſh dung taken from off the north ſide lining, and laid aſide, and then the rotten part in the bottom carried away, and

and the unexhauſted dung that was on the top worked into the bottom part, and the deficiency made up with freſh dung. The lining was made near three feet wide in the foundation, and tapered up to about twenty-ſix inches at the top.

Wedneſday, January 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	30	N. E. Cloudy, cold, and windy.
8	—	—	30	N. E. Ditto.
9	58	81	30	N. E. Ditto.
10	55	81	31	N. E. Ditto.
12	56	80	31	N. E. Ditto.
2	55	80	31	N. E. Ditto.
4	54	79	31	N. E. Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up about 4 o'clock with about four inches thick of hay and mats. The linings were examined, and put cloſe to the ſides of the frames. Air was given in the day-time, and a little left at each light all night. As the weather is ſo cold and windy, it would have been better not to have changed the back lining yeſterday, but to have deferred it for ſome days longer, by which the heat would have been kept more ſteady, which is a great advantage, eſpecially in windy weather.

Thurſday,

Thurſday, January 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	31	N. Foggy.
8	—	—	32	N. Ditto.
9	78	81	33	N.E. It rains.
10	68	81	35	N.E. Cloudy, and a briſk gale
12	68	80	35	N.E. Ditto. [of wind.
2	61	79	31	N.E. Ditto.
4	57	79	30	N.E. Ditto.
10	—	—	29	N.E. Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up about 4 in the evening with hay and mats; but little air was given in the day-time, and the lights were ſhut cloſe down all night.

Friday, January 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	29	N.E. Cloudy, and windy.
9	70	81	30	N.E. Ditto.
10	63	80	31	N.E. Ditto.
11	67	80	32	N.E. Scattered clouds.
12	70	80	32	N.E. Ditto.
2	72	81	31	N.E. Sunſhine.
3	69	82	31	N.E. Clouds here and there.
4	63	81	29	N.E. Clear, and the wind is fallen.
8	—	—	27	N.E. Clear, and near calm.
10	—	—	22	N.E. Ditto.

The frames were uncovered a little before 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats; but little air was given in the day-time, and the lights were ſhut cloſe down in the evening for the night.

Saturday,

Saturday, January 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	19	N. E.	Clear, calm, and a white [froſt.
8	—	—	19	N. E.	Ditto.
9	72	82	20	N. E.	Sunſhine.
10	68	82	22	N. E.	Ditto.
11	72	82	25	N. E.	Ditto.
12	76	83	26	N.W.	Ditto.
1	78	84	27	N.W.	Ditto.
2	75	85	27	N.W.	The ſun ſhines faintly.
4	68	85	26	N.W.	Ditto.
5	—	—	26	N.W.	There is a thick fog, which has a diſagreeable ſmell.
8	—	—	24	N.W.	Foggy.
10	—	—	25	N.W.	The fog is got high.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. The lights were kept cloſe ſhut down till 1 o'clock, when a little air was admitted, and continued till 3 o'clock, and then the lights were ſhut down again for the night. The linings were raiſed as high as the ſurface of the mould in the frames with hot dung.

About 3 o'clock in the afternoon, by trial, I found the water underneath the ice in the pond to raiſe the thermometer to 33, and that running out of a pipe into the pond, raiſed it to 39, and the ſpring from whence the ſaid water came, raiſed it to 45 degrees; ſo that the water, by running about a quarter of a mile through the pipe in the earth, had become ſix degrees colder than when in the ſpring.

Sunday,

Sunday, January 20, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	28	W. The air is thick, and a
9	85	90	29	W. Ditto. [white froſt.
10	78	89	30	W. Ditto.
11	75	89	31	W. Ditto.
1	73	88	32	W. Gloomy.
2	71	88	32	W. Ditto.
4	68	87	31	W. Ditto.
6	—	—	29	W. Cloudy, and but little wind.

The frames were uncovered about 9 o'clock in the morning, and covered up at 4 in the evening with about four inches thick of hay and mats. Air was given at 10 o'clock, and continued all the day, and a little left at each light all night.

Monday, January 21, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	29	S.W. Thin clouds, near calm.
8	—	—	28	S.W. Ditto.
9	86	92	29	S.W. Ditto.
10	78	91	31	S.W. Ditto.
12	73	90	36	S.W. Ditto.
2	73	89	36	S.W. Cloudy, and a briſk wind.
4	69	88	34	S.W. Ditto.
7	—	—	29	S.W. Clear, and nearly calm.
9	—	—	27	S.W. Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. Air was continued all day, and a little left all night. The north ſide lining, being ſunk, was raiſed with freſh dung.

In

In the forenoon I went over the plants, ſtopped them, thinned their leaves, and put pieces of glaſs under ſome ſet fruit.

Tueſday, January 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	31	S.W. Thin clouds, nearly calm.
9	82	92	33	S.W. Gloomy.
10	76	91	35	S.W. Ditto.
12	76	90	39	S.W. Ditto.
2	67	90	38	S.W. Ditto.
4	68	89	35	S.W. Ditto.
7	—	—	33	S.W. Ditto.

The frames were uncovered a little before 9 o'clock in the morning, and covered up about 4 in the evening with hay and mats. Air was given in the day-time, and a little left at each light all night. To-day the linings were well watered

Wedneſday, January 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	30	S.W. Dull cloudy morning.
9	78	91	33	S.W. Cloudy, and but little wind.
10	73	90	34	S.W. Ditto.
12	68	88	37	S.W. Ditto.
4	62	87	33	S.W. Ditto.
8	—	—	34	S.W. Ditto.

The frames were uncovered at 9 o'clock, and covered up in the evening with about two inches thick of hay and mats. At noon I went over the plants and ſtopped them, and thinned their leaves, and laid out their vines regularly. I alſo ſtirred here and there

the mould on the flues, and on thoſe parts where I found the mould dry, there I ſtrewed on ſome that was moiſt. Air was continued night and day.

Thurſday, January 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	36	S.W.	Cloudy, and near calm.
8	79	90	38	S.W.	Ditto.
10	72	89	41	S.W.	It begins to rain.
12	67	87	42	S.W.	It rains gently.
2	66	87	42	S.W.	Small rain.
4	66	87	42	S.W.	Ditto.
7	—	—	42	S.W.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. Air was given in the day-time, and a little left at each light all night. The north ſide lining was very hot, and a great ſteam riſing out of it, therefore water was poured upon it plentifully

Friday, January 25, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	36	N.E.	It rains, and there had been much rain in the night.
8	72	88	36	N.E.	It rains lightly.
10	67	87	37	N.E.	Fair, gloomy.
12	68	86	38	N.E.	Ditto.
2	67	86	37	N.E.	Ditto.
4	69	86	35	N.E.	Ditto.
10	—	—	28	N.E.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning,

morning, and covered up between 4 and 5 in the evening with hay and mats. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, and thoſe fruit that I found in bloſſom I ſet. A little air was continued day and night. The linings, being ſunk, were raiſed with dung freſh from the ſtables.

Saturday, January 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	22	N.	Clear, and nearly calm.
9	80	90	24	N.E.	Ditto.
10	80	90	26	S.E.	Sunſhine.
12	83	91	31	S.E.	Ditto.
1	76	90	34	S.E.	Cloudy.
3	72	90	33	S.E.	Ditto.
4	68	89	30	S.E.	Ditto.
7	—	—	25	S.E.	Clear, and nearly calm.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with four inches thick of hay and mats. About noon I went over the plants, and ſtopped them, and ſet the fruit that were in bloſſom. Air was continued day and night at every light.

Sunday, January 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	28	S.W.	Cloudy, gloomy.
9	79	92	32	S.W.	Snow falls.
10	73	91	33	S.W.	Cloudy.
11	72	90	35	S.W.	Thin clouds.
1	76	90	38	S.W.	The ſun glimmers.
2	77	91	39	S.W.	Cloudy.
4	68	90	37	W.	Ditto.
9	—	—	33	W.	Ditto.

The frames were uncovered about 9 o'clock in the morning,

morning, and covered up in the evening with hay and mats; air was given in the day-time, but the lights were ſhut cloſe down all night.

Monday, January 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	36	W.	Cloudy and gloomy.
9	84	94	38	W.	Ditto.
10	80	93	40	W.	Thin clouds.
12	85	93	45	W.	Bright ſunſhine.
1	88	94	47	W.	Ditto.
2	89	94	48	W.	Ditto.
4	77	93	44	W.	Small clouds here and there.

The frames were uncovered a little before 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. Air was given at 9 o'clock in the morning, and continued all day, and a little left at every light all night.

To-day I mixed together the moiſt and dry mould that lay on the flues, and laid it round the ſides of the hills; and I laid about an inch thick of it among the ſtems and vines of the plants; and having made the ſurface of the hills level, I trained the plants out carefully, and pegged them down here and there at their joints, lightly covering thoſe part with mould, in order that they might ſtrike root, and thereby ſtrengthen themſelves. The hills now on all ſides cover about three inches of the ſurface of the flues, and the other parts of the flues are left nearly bare of mould.

Tueſday,

Tueſday, January 29, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	37	S.W.	Cloudy, and a briſk wind.
9	72	92	39	S.W.	Ditto.
10	74	92	42	S.W.	Ditto.
1	76	91	50	S.W.	The ſun glimmers.
2	70	91	47	S.W.	Cloudy, and it rains a little.
4	70	91	46	S.W.	Cloudy, and a briſk gale
7	—	—	45	S.W.	Ditto. [of wind.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with three inches thick of hay and mats. Air was continued day and night. About 11 o'clock I gave the plants a moderate watering, in doing which I gave moſt round the ſides of the hills cloſe to the flues, for there the heat is always greateſt. I alſo watered the plants all over their leaves, and poured ſome on the flues and againſt the ſides of the frames, to waſh and ſweeten them. The water was 76 degrees warm.

Wedneſday, January 30, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	37	W.	Cloudy, and a briſk wind.
9	77	92	35	N.W.	Ditto.
10	70	91	36	N.W.	Ditto.
11	72	91	37	N.W.	Sunſhine.
12	70	91	37	W.	Ditto.
2	68	91	38	W.	Windy, and ſome clouds.
3	71	91	39	W.	Ditto.
4	64	90	37	W.	Clouds here and there.
8	—	—	35	W.	Cloudy, and a briſk gale [of wind.

The frames were uncovered at 9 o'clock in the

morning, and covered up in the evening with about three inches thick of hay and mats. Air was given day and night. At noon I went over the plants, and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. To-day I began to cut fruit.

Thurſday, January 31, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	29	W. Clear, and a briſk gale of
9	70	88	32	W. Ditto. [wind.
10	72	88	35	W. Sunſhine.
12	75	89	42	W. The air is overcaſt with
2	65	88	42	W. Cloudy. [thin clouds.
4	70	88	40	W. Ditto.
7	—	—	37	W. Ditto.
10	—	—	39	W. Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up between 4 and 5 in the evening with about four inches thick of hay and mats. The linings, being ſunk, were raiſed with freſh dung. Air was given in the day-time, but the lights were ſhut down cloſe all night. I went over the plants and ſtopped them, and ſet the fruit in bloſſom, and nipped off ſeveral male and female bloſſoms where they were too thick.

Friday,

Friday, February 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	38	S. It rains lightly.
9	84	91	42	S. Ditto.
10	78	91	43	S. Cloudy, and a briſk wind.
11	72	90	43	S. Ditto.
12	77	90	44	S. Scattered clouds. [then.
1	84	91	45	S. The ſun ſhines now and
2	80	91	45	S. Windy, and ſome clouds.
4	74	91	43	S. Cloudy, windy.
10	—	—	37	W. Clear, and a briſk wind.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. But little air was given to-day. The lights were ſhut down at 3 o'clock, and remained ſo all night. At noon I went over the plants, and ſtopped them, ſet the fruit in bloſſom, and thinned the leaves where wanted.

Saturday, February 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	31	S.W. Clear, and a briſk wind.
9	88	95	35	S.W. There is a rainbow in the weſt.
10	80	95	36	S.W. Sunſhine, and a briſk
11	76	93	38	S.W. Showers of rain. [wind.
12	74	92	41	S.W. Squally ſhowers.
2	70	91	43	S.W. Ditto.
4	63	90	42	S.W. Showery and windy.
6	—	—	42	S.W. High wind and ſhowers.
10	—	—	42	S.W. Ditto.

The frames were uncovered at 9 o'clock in the

morning, and covered up in the evening with about three inches thick of hay and mats. Air was given in the day-time, and a little left at each light during the night. To-day the linings were watered.

Sunday, February 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	38	S.W. Clear, and a briſk gale
9	69	88	40	S.W. Ditto. [of wind.
10	68	87	43	S.W. Scattered clouds, windy.
11	68	87	44	S.W. Showery and windy.
1	71	87	45	S.W. Windy, and flying clouds.
4	57	86	39	S.W. Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening as uſual. Air was continued day and night.

Monday, February 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	34	S.W. Clouds here and there.
9	76	88	37	S.W. Cloudy, and a briſk wind.
10	70	87	38	S.W. Ditto.
12	70	87	42	S.W. Sunſhine.
1	80	87	42	S.W. The ſun ſhines faintly.
2	78	88	41	S.W. Ditto.
4	70	88	39	S.W. Clouds here and there.
8	—	—	33	S.W. Clear, and nearly calm.

The frames were uncovered at 9 o'clock in the morning, and covered up between 4 and 5 in the evening with about three inches thick of hay and mats. Air was given in the day-time, and a little

little left all night at each light. I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit that were in bloſſom. The mould on the flues was got quite dry, therefore I had it taken off, and the flues ſwept with a hair hand-broom: This being done, I took water warmed to about 75 degrees, and poured plenty of it on the flues, and againſt the ſides of the frames all round about. Having thus done, I ſhut the lights cloſe down for about twenty minutes, and then gave air.

Tueſday, February 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	31	S. Calm, and but few clouds.
9	80	89	33	S. Ditto.
10	77	89	36	S. E. Foggy, clouds.
12	78	88	39	S. E. The ſun glimmers.
2	80	89	40	N. Sunſhine.
4	73	89	38	N.W. Clouds here and there.
8	—	—	30	N.E. Ditto.

The frames were uncovered about 9 o'clock, and covered up between 4 and 5 in the evening with about three inches thick of hay and mats. About 4 o'clock I took water 80 degrees warm, and therewith I watered the ſides of the hills all round, and then gave each hill of plants a ſmall pot full of water all over their leaves; alſo I ſprinkled the flues, and ſides of the frames. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet.

Wedneſday, February 6, 1793.

Hours.	S.Th	P.Th.	Ther.	Wind.	
6	—	—	33	S.W.	It rains lightly.
9	82	89	38	S.W.	Ditto.
10	74	89	42	W.	The ſun ſhines faintly.
12	80	89	45	N.W.	Ditto.
1	82	89	45	N.W.	High foggy clouds.
2	76	89	43	N.W.	Cloudy, and a briſk wind.
4	72	89	41	N.W.	Ditto.
10	—	—	37	N.W.	It has rained ſince 7 o'cl.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. I went over the plants, and ſtopped them, thinned their leaves, ſet the fruit in bloſſom, and picked out the weeds and the dead bloſſoms. Air was given the greateſt part of the day, and a little left all night. The north ſide lining was raiſed with freſh dung.

Thurſday, February 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	31	W.	Cloudy; there had been much rain in the night, and the earth is covered with ſnow.
8	—	—	32	W.	Clear in the north-weſt.
9	80	89	31	N.W.	Cloudy in the eaſt.
10	77	89	33	N.W.	Sunſhine.
12	85	89	38	N.W.	The ſnow is nearly gone.
1	87	89	38	N.W.	Sunſhine.
2	86	90	38	N.W.	Scattered clouds.
4	75	90	36	N.W.	Ditto.
10	—	—	33	N.W.	Clouds here and there.

The frames were uncovered at 9 o'clock, and covered

vered up at half paſt 4 in the evening with about three inches thick of hay and mats. At 3 o'clock I took water 85 degrees warm, and watered well therewith the outſides of the hills all round, and poured ſome on the flues. A little air was then given, and let remain all night.

To-day the ſouth ſide lining was turned over, and well ſhaken, and made up again, and ſome freſh dung laid on the top of it.

Friday, February 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	32	S.W.	Cloudy, and a briſk wind.
9	72	87	36	S.W.	Cloudy and windy.
10	68	86	40	S.W.	Windy, and it rains.
12	67	84	43	S.W.	It rains hard.
1	62	82	38	S.W.	Fair ; the ſun appears.
4	66	82	42	S.W.	Cloudy and windy.
7	—	—	40	S.W.	Ditto.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. I went over the plants, and ſet the fruit in bloſſom. But little air was given in the day-time, and the lights were ſhut down in the evening for the night.

Saturday, February 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	W.	Thin clouds cover the ſky.
9	73	81	38	W.	Cloudy, and but little wind.
10	70	81	40	W.	Ditto.
12	70	81	45	W.	The ſun glimpſes.
2	74	81	46	S.W.	Ditto.
4	68	81	45	S.	Cloudy.
10	—	—	40	S.	Ditto.

The frames were uncovered at 9 o'clock, and covered up in the evening with about four inches thick of hay and mats. I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. About 4 o'clock I took water about 78 degrees warm, and watered the ſides of the hills, and poured ſome on the flues. Air was given in the day-time, and a little left all night at each light.

Sunday, February 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	32	W.	Clear, and a ſtrong gale of wind.
9	68	80	34	W.	Ditto.
10	69	80	37	W.	Windy, and flying clouds.
11	69	80	38	W.	High wind, and ſome clouds.
1	70	80	38	W.	Ditto.
2	72	80	36	W.	A ſhower of dry hail.
4	68	80	36	W.	High wind, and ſome clouds.
9	—	—	33	W.	Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with hay and mats. Air was given till 1 o'clock, when the lights were cloſe ſhut down for the night.

Monday,

Monday, February 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	N.W.	Clear, and a high wind; the wind was very high in the night.
9	77	82	37	N.W.	Sunſhine., windy.
10	77	82	37	N.W.	Ditto.
12	80	83	38	N.W.	Ditto.
2	78	84	38	N.W.	Scattered clouds.
4	72	83	37	N.W.	Ditto.
9	—	—	36	N.W.	Cloudy, and a briſk gale of wind.

The frames were uncovered about 9 o'clock, and covered up between 4 and 5 in the evening with about four inches thick of hay and mats. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was given in the day-time, and the lights were ſhut cloſe down all night. A little earth was laid all round the outſides of each hill to cover the roots of the plants, which were come through the hills very thick.

Tueſday, February 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	38	W.	Cloudy, and a briſk wind.
9	70	82	41	W.	Ditto.
10	70	82	44	W.	Ditto.
12	72	82	47	W.	Scattered flying clouds.
2	79	83	47	N.W.	Ditto.
4	70	83	43	N.W.	Cloudy and windy.
7	—	—	42	W.	Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about four

four inches thick of hay and mats. The linings, being ſunk, were raiſed with freſh dung. In the forenoon I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. At 3 o'clock I took water 80 degrees warm, and gave the ſides of the hills all round a good watering, and ſprinkled ſome of it on the flues. But little air was given in the day-time, and the lights were ſhut cloſe down during the night.

Wedneſday, February 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	35	S.W. Cloudy, and but little wind.
8	81	85	36	S.W. The ſky is red before the ſun.
10	73	84	39	S.W. It rains very lightly.
12	75	84	48	S.W. Cloudy.
2	76	84	50	S.W. Ditto.
4	72	84	50	S.W. Ditto.
5	68	84	48	S.W. Ditto.
7	—	—	46	S.W. Ditto.

The frames were uncovered at 8 o'clock in the morning, and covered up about 5 o'clock in the evening with about three inches thick of hay and mats. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom, and I nipped off ſeveral of the ſhowing fruit and male bloſſoms where they were too thick. I poured water on the flues and ſides of the frames all round; the water was about 78 degrees warm. Air was given in the day-time, and a little left at each light all night.

Thurſday,

Thurſday, February 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	44	S W.	Windy, and a ſmall dri-
8	74	84	45	S W.	Ditto. [ving rain.
10	68	83	44	W.	It rains.
12	66	82	39	N.W.	Ditto.
2	76	83	43	N.W.	Sunſhine.
4	70	83	41	W.	Clouds here and there.
7	—	—	35	W.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with three inches thick of hay and mats. The lights were ſhut down at 11 o'clock, and remained ſo till about 1 o'clock, when a little air was given and continued all night. I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom, and picked off ſeveral of the ſhowing and ſet fruit where they were too thick.

Friday, February 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	S.W.	It rains.
8	72	83	36	S.W.	Ditto.
10	68	82	37	S.W.	Ditto.
12	72	83	39	S.W.	Fair, gloomy.
2	70	82	40	S.W.	Thick moiſt air.
4	68	82	39	S.W.	It rains gently.
5	67	82	38	S.W.	Fair, gloomy.
7	—	—	36	S.W.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up at 5 in the evening with three inches thick of hay and mats.

I looked

I looked over the plants, and ſtopped them, thinned their leaves, and ſet the fruits in bloſſom. But little air was given in the day-time, and the lights were ſhut down all night. The linings were raiſed with dung juſt taken out of the ſtables.

Saturday, February 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	30	N.E.	Cloudy in the horizon.
9	79	85	31	N.E.	Cloudy.
10	75	85	34	N.E.	The ſun ſhines faintly.
12	77	84	37	N.E.	Ditto.
2	80	84	38	N.E.	Ditto.
4	75	84	37	N.E.	Cloudy, and but little
5	71	86	36	N.E.	Ditto. [wind.

The frames were uncovered at 9 o'clock, and covered up in the evening with about four inches thick of hay and mats. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, ſet the fruit in bloſſom, and picked out of the mould ſome weeds. Air was admitted in the day-time, and the lights ſhut down all night.

Sunday, February 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	29	N.E.	Foggy, nearly calm.
9	82	86	31	N.E.	Ditto.
11	76	85	37	N.E.	Foggy clouds.
1	75	85	39	N.E.	Cloudy, gloomy.
4	70	85	37	N.E.	Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about three

three inches thick of hay and mats. But little air was given in the day-time, and leſs during the night.

Monday, February 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	S.W.	Thin clouds, and a briſk
8	80	86	35	S.W.	Cloudy. [wind.
10	74	85	37	S.W.	Ditto.
12	70	84	42	S.W.	It rains lightly.
2	68	84	43	S.W.	Ditto.
4	70	83	41	W.	Cloudy.
5	—	—	40	N. E.	Ditto.

The frames were uncovered between 8 and 9 o'clock in the morning, and covered up a little paſt 4 with about three inches thick of hay and mats. About two o'clock I poured plenty of water on the flues all round the plants, and thoſe parts of the ſides of the hills that were getting dry I watered plentifully. The water that I uſed was about 80 degrees warm.

After watering, the lights were ſhut down for about an hour, and then a little air was given at each light, and continued all night. The plants were looked over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet.

Tueſday,

Tuesday, February 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	26	S.W. Clear, and but little wind.
8	79	85	28	S.W. Ditto.
10	80	85	35	S.W. Sunshine.
12	85	86	38	S.W. Ditto.
2	84	86	39	S.W. Ditto.
4	77	86	39	S.W. Ditto.
5	76	86	38	S.W. Clear, and near calm.

The frames were uncovered about 8 o'clock in the morning, and covered up at 5 in the evening with about three inches thick of hay and mats.

In the forenoon I went over the plants and stopped them, thinned their leaves, and set the fruit in blossom. Air was given plentifully in the day-time, and a little all night.

Wednesday, February 20, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	27	N.W. Clear, and nearly calm.
8	79	85	26	N.W. Ditto.
9	75	85	29	N.W. Sunshine.
11	87	86	35	N.W. Ditto.
12	87	87	39	N.W. Ditto.
2	90	88	41	N.W. Ditto.
3	90	89	42	S.W. Scattered clouds.
4	84	89	40	S.W. Ditto.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. Air was given in the day-time, and a little left at each light all night. The plants were gone over and stopped, their leaves thinned, and the fruit in blossom set.

Thursday,

Thurſday, February 21, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	31	S.E. White froſt, ſome clouds, but little wind.
8	80	85	32	S.W. Clear, and a briſk wind.
10	81	85	34	S.W. Sunſhine, and a briſk gale
12	85	85	37	S.W. Ditto. [of wind.
2	86	86	39	S.W. Ditto.
4	80	86	40	S.W. Ditto.
8	—	—	32	S.W. Clear, and nearly calm.

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. Plenty of air was admitted in the day-time, and a little left all night. I went over the plants in the forenoon, and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom.

Friday, February 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	25	S.W. Clear, and nearly calm.
8	75	83	26	S.W. Ditto.
10	82	83	29	S.W. Sunſhine.
12	90	85	38	S.W. Ditto.
2	88	85	40	S.W. Ditto.
4	80	85	39	S.W. Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. The plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. At noon I watered all round the ſides of the hills next to the flues, and then I laid

I laid ſome mould on the flues between each hill, and alſo a little round the ſides of the hills to cover the roots of the plants. The linings, being ſunk, were raiſed with hot dung.

Saturday, February 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	41	S.W. Thin clouds, and a briſk
8	78	86	42	S.W. Ditto. [wind.
10	75	86	47	S.W. Ditto.
11	83	86	50	S.W. The ſun ſhines faintly.
12	84	86	50	S W. Ditto.
2	80	86	49	S.W. Cloudy.
4	70	85	47	S.W. It rains a little.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. Air was given in the day-time, but the lights were ſhut down all the night.

Sunday, February 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	44	S.W. Thin clouds, nearly calm.
8	78	85	50	S.W. Ditto.
10	79	85	50	S.W. Ditto.
11	82	86	52	S.W. Cloudy, and nearly calm.
1	83	86	55	S.W. The ſun glimmers.
2	82	86	54	S.W. Ditto.
4	80	86	49	S.W. Cloudy, gloomy.
5	76	85	48	S.W. Ditto.
8	—	—	46	S.W. Cloudy, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with

about two inches thick of hay and mats. There was but little air admitted in the day-time, and leſs in the night. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, and ſet the fruit in bloom. The linings were examined, and put cloſe to the bed, and then a layer of freſh dung laid on the top of them.

Monday, February 25, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	44	S.W.	Cloudy, and a briſk wind.
8	78	86	47	S.W.	Ditto.
10	75	86	47	S.W.	Ditto.
12	68	85	48	S.W.	Ditto.
2	70	85	48	S.W.	Cloudy and windy.
4	68	84	45	S.W.	Ditto.

The frames were uncovered about half paſt 8 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, ſet the fruit that were in bloom, and where I found them too thick, I nipped off ſeveral ſhowing fruit.

About 3 o'clock in the afternoon I got water about 85 degrees warm, and therewith I watered well the ſides of the hills all round about, and I poured ſome on every part of the flues. I uſed about a hogſhead of water, and when the watering was finiſhed, I had the lights ſhut down cloſe till about 8 o'clock at night, when a little air was admitted at every light.

Tuesday, February 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	37	N.W.	Windy, and some clouds.
8	76	84	39	N.W.	Clear, and windy.
10	79	84	41	N.W.	Ditto.
12	80	84	44	N.W.	Sunshine, windy.
2	80	85	47	W.	Ditto.
4	79	85	47	W.	The wind is fallen.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. Air was given in the day-time, but the lights were shut close down all night. The plants were gone over, and stopped, their leaves thinned, and the fruit in bloſſom set.

Wednesday, February 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	40	S.W.	Cloudy, and a brisk wind.
8	80	86	43	S.W.	Ditto.
10	78	86	45	S.W.	Cloudy and windy.
12	70	85	47	S.W.	Ditto.
2	60	84	47	S.W.	Ditto.
4	58	83	46	S.W.	Ditto.
8	—	—	40	S.W.	Clouds in the horizon, calm.

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening with about five inches thick of hay and mats. In the forenoon I went over the plants, and stopped them, thinned their leaves, and set the fruit in bloſſom, and after that I took mould, and laid upon all the croſs flues, and raiſed it on them as high as the mould of the hills, and by preſſing it gently I made it nearly of an equal firmneſs

firmneſs with that in which the plants were growing. I alſo laid ſome mould all along the ſides of the hills, leaving a vacancy only of about five inches between the mould and the ſides of the frames on each ſide of the plants. This vacancy is left to let the heat ariſe freely from the ſide flues, to warm the air in the frames for the nouriſhment and growth of the plants. Likewiſe I laid a little freſh mould among the ſtems and ſhoots of the plants. It was 4 o'clock before I had done; the lights were then ſhut down for the night.

Thurſday, February 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	40	S.W. Cloudy, and but little wind.
8	78	85	41	S.W. A ſmall miſty rain falls.
10	70	85	44	S.W. Ditto.
12	83	85	45	S.W. Scattered clouds.
2	84	85	45	S.W. The ſun ſhines. [calm.
4	80	86	44	S.W. Scattered clouds, near
5	77	86	40	S.W. Clouds here and there.
8	—	—	37	W. Clear and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. About noon I went over the plants, and ſtopped them, thinned their leaves, and ſet the fruit that were in bloſſom. In ſeveral parts of the frames the plants were hanging over the ſides of the hills, and down on the flues; therefore I took bricks, and ſet them edgewiſe on the flues cloſe againſt the ſides of the frames, eight inches high above the flues. I then took plain tiles eleven

inches long, and laid the one end of them on the ſaid bricks, and the other reſted on the mould of the hills. This I did only here and there, where the plants had extended their ſhoots beyond the ſurface of the hills of mould; and where more tiles than one were required near each other, I left vacancies between them of about two inches, ſo that the warmth of the flues might not be hindered from riſing freely; and as I proceeded I trained out carefully the vines of the plants on the tiles. The plants are in a vigorous fruitful ſtate, and their leaves broad, ſome of them meaſuring nine and ten inches diameter.

Friday, March 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	40	S.W. Flying clouds, windy.
8	83	88	42	S.W. Ditto.
10	74	87	43	S.W. Ditto.
12	66	86	42	S.W. High wind, and a ſmall
2	68	86	43	S W. Ditto. [rain.
4	65	85	44	S.W. Ditto.
5	64	85	44	S.W. Ditto.

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. Air was given in the day-time, and a little left all night at each light. The plants were gone over, and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. At 5 o'clock in the evening water 80 degrees warm was poured on the flues, till it ſtood in pools here and there.

Saturday,

Saturday, March 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	40	S.W.	Windy, and ſome clouds.
8	70	83	42	S.W.	Ditto.
10	76	83	45	S.W.	The ſun ſhines faintly.
12	82	84	48	S.W.	Ditto.
2	75	85	50	S.W.	Cloudy, and windy.
4	68	84	49	S.W.	Ditto.
5	64	83	48	S.W.	Ditto.
8	—	—	48	S.W.	Ditto.

The frames were uncovered between 8 and 9 o'clock in the morning, and covered up at 5 in the evening with three inches thick of hay and mats. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was given now and then in the day-time, and a little left all the night at each light.

Sunday, March 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	35	W.	Clear, and a high wind; the wind was very high laſt night.
8	62	81	37	W.	Clear, and a high wind..
10	74	81	41	W.	Sunſhine, windy.
11	80	82	43	W.	Scattered clouds, windy.
1	82	83	45	W.	Ditto.
4	71	84	42	W.	A ſhower of hail.
5	68	84	41	W.	Cloudy, and windy.
9	—	—	36	W.	Clear, and windy..

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with

three inches thick of hay and mats. Air was given in the middle of the day, and the lights were ſhut cloſe down all night.

Monday, March 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	29	W. Clear, and a briſk gale of
8	75	84	31	W. Ditto. [wind.
10	76	84	35	W. Sunſhine.
12	85	85	40	W. Scattered great clouds.
2	82	85	43	W. Ditto.
4	75	85	42	W. A heavy ſhower of hail.
5	68	85	40	W. Great black clouds.
7	—	—	35	W. Clear, and near calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. In the forenoon I went over the plants, and ſtopped them, thinned their leaves, and ſet the fruit in bloom.

At 4 o'clock I took water about 85 degrees warm, and poured it plentifully on the flues, and then ſhut the lights cloſe down. The plants are very vigorous, and their roots appear thick all over the ſurface of the mould, and are matted cloſe to the flues, and where the bare parts of the flues are moiſt, there the roots are run upon them.

Tueſday,

Tuesday, March 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	30	S. E. Thin clouds, but little wind.
8	78	85	33	S. E. Ditto.
10	78	85	37	S. E. Ditto.
12	85	85	43	S. E. The sun shines faintly.
2	82	86	45	S. E. Ditto.
4	80	86	44	S. E. Cloudy, and a brisk wind.
5	78	86	43	S. E. Ditto.
8	—	—	40	S. E. Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up about half past 5 with four inches thick of hay and mats. At noon I went over the plants, and stopped them, thinned their leaves, set the fruit in blossom, and nipped off the weakest of the showing fruit where they were too thick. Air was given at 10 o'clock in the morning, and continued till between 3 and 4 in the afternoon, when I poured some water on the flues and against the sides of the frames, and then shut the lights down for the night.

Wednesday, March 6, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	34	E. Cloudy, and near calm.
8	78	85	37	E. Ditto.
10	80	85	42	E. The sun glimpses.
12	88	86	48	N. E. Scattered clouds.
2	80	86	47	N. E. Cloudy.
4	73	86	41	N. E. A shower of hail at 3 o'cl
5	69	86	40	N. E. Clouds near the horizon.
7	—	—	35	N. E. Clear, and a brisk wind.

The frames were uncovered about 8 o'clock in the

morning, and covered up a little paſt five with four inches thick of hay and mats. At noon I went over the plants, and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was given now and then in the day-time, and a little left at each light all night.

Thurſday, March 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	31	N.E.	Cloudy, and but little wind.
9	75	85	35	N.E.	Cloudy and gloomy.
10	72	84	39	N.E.	Ditto.
12	76	84	45	N.E.	The ſun glimpſes.
2	80	84	44	N.E.	Ditto.
4	73	84	40	N.E.	Cloudy, and a briſk wind.
5	70	84	38	N.E.	Ditto.
8	—	—	36	N.E.	Ditto.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. The plants were gone over, and ſtopped, their leaves thinned, the fruit in bloom ſet, and ſeveral ſhowing fruit nipped off. But little air was given in the day-time, and at 4 o'clock the lights were ſhut cloſe down for the night.

Friday,

Friday, March 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	N. E.	Cloudy and cold.
9	72	83	36	N. E.	Scattered clouds.
10	78	83	37	N. E.	Sunſhine, windy.
12	85	84	39	N. E.	Ditto.
2	84	85	40	N. E.	Ditto.
4	80	85	37	N. E.	Ditto.
5	70	85	35	N. E.	Ditto.
7	—	—	30	N. E.	Clear and windy.

The frames were uncovered juſt before 9 o'clock, and covered up in the evening with about 3 inches thick of hay and mats. In the forenoon I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was given at 10 o'clock, and continued till between 3 and 4, when it was taken away for the night.

Saturday, March 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	30	E.	Cloudy and a briſk gale of wind.
9	74	83	35	E.	Ditto.
10	75	83	38	E.	Scattered clouds.
12	90	85	41	E.	Sunſhine.
2	80	85	41	E.	Ditto.
4	77	85	38	E.	Ditto.
5	70	85	35	E.	Clear, and a briſk wind.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. The plants were gone over and ſtopped, their leaves thinned, the fruit in bloſſom ſet, and the weeds picked out of the mould

mould among the plants. Air was continued all day, and a little left at each light during the night.

Sunday, March 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	24	E. Clear and calm.
8	70	82	23	E. Ditto.
10	72	82	33	E. Sunſhine.
11	77	83	38	E. Ditto.
1	75	84	40	E. Ditto.
2	74	84	39	E. The air is overcaſt.
5	70	84	35	E. Cloudy and windy.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was given in the day-time, and ſome left all night.

Monday, March 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	31	E. Cloudy, windy, cold.
8	—	—	33	E. Ditto.
10	68	80	34	E. Ditto.
11	66	80	35	E. Ditto.
12	67	79	36	E. Ditto.
1	68	79	36	E. Ditto.
2	65	79	35	E. Ditto.
4	63	79	34	E. Ditto.
5	62	79	33	E. Ditto.

The frames were uncovered a little before 10 o'clock, and covered up at five in the evening with about five inches thick of hay and mats: At noon I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. The linings were

were raiſed higher than the mould in the frames with freſh dung. The lights were kept ſhut down as cloſe as poſſible all the day, and remained ſo during the night.

Tueſday, March 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	30	E.	Cloudy, windy, and cold.
9	70	79	32	E.	Ditto.
10	70	79	33	E.	Scattered clouds, windy.
12	80	80	35	E.	Sunſhine, windy.
2	87	82	36	E.	Ditto.
4	86	82	35	E.	Ditto.
5	80	82	33	E.	Ditto.
6	—	—	30	E.	Clear, the wind fallen.

The frames were uncovered about 9 o'clock in the morning, and covered up at 5 in the evening with four inches thick of hay and mats. I went over the plants and ſtopped them, thinned their leaves, and ſet thoſe fruit that were in bloom. Air was given at 10 o'clock in the morning, and remained till 4 in the afternoon, when the lights were ſhut down for the night.

Wedneſday, March 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	40	S.	Cloudy; there had been rain in the night.
8	78	82	45	S.W.	Cloudy, and a briſk wind.
9	76	82	47	S.W.	Ditto.
10	72	82	48	S.W.	Ditto.
12	78	82	53	S.W.	Ditto.
4	78	83	52	S.W.	Ditto.
5	72	82	48	S.W.	Ditto.

The frames were uncovered about 8 o'clock in

the morning, and covered up in the evening with about four inches thick of hay and mats. Air was admitted at 9 o'clock, and continued all day, and a little left all night at each light. In the forenoon I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom.

Thurſday, March 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	39	S.	Cloudy and near calm.
8	79	83	43	S.	Ditto.
10	82	83	50	S.	The ſun glimmers.
11	88	84	53	S.W.	Ditto.
22	83	85	55	S.W.	Ditto.
2	88	85	53	S.W.	Ditto.
3	88	85	52	S.W.	Sunſhine.
4	85	85	50	S.W.	Clouds here and there.
7	—	—	43	S.W.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered in the evening with about two inches thick of hay and mats. In the morning I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Between 11 and 12 o'clock I watered the plants with water eighty-five degrees warm; in doing which I firſt poured ſome of it on the mould next and cloſe to the flues, and then poured it all over the plants and every part of the frames, out of a watering-pot with a roſe on its ſpout; I gave them about a hogſhead of water, and immediately ſhut the lights down for about a quarter of an hour.

Friday,

Friday, March 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	29	S.W.	Clear and near calm.
8	79	85	35	S.W.	Ditto.
10	88	86	41	S.W.	Sunſhine.
12	89	86	48	W.	Ditto.
2	87	87	52	W.	Ditto.
3	77	87	48	W.	The air is overcaſt.
4	74	87	47	W.	Cloudy, and but little wind.
5	72	86	47	W.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. The plants were gone over and ſtopped, their leaves thinned, the weeds picked out, and the fruit in bloſſom ſet. Air was given plentifully in the day-time, and a little left all night at each light.

Saturday, March 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	39	S.	Thin clouds; nearly calm.
8	81	86	44	S.	Cloudy, and a briſk wind.
10	85	86	47	S.	Cloudy and windy.
12	85	87	52	S.W.	Ditto.
3	78	87	48	S.W.	Ditto.
4	74	86	47	S.W.	Ditto.
5	70	86	46	S.W.	It begins to rain.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with two inches thick of hay and mats. When the frames were uncovered I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit that

that I found in bloſſom. In the forenoon I poured water upon the flues on each ſide of the plants. Air was given day and night.

Sunday, March 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	29	S.W. Clear; there had been rain in the night.
8	74	83	35	S. Clouds here and there.
10	85	83	39	S. Sunſhine.
11	85	83	42	S. E. Scattered clouds.
1	83	84	46	S. E. Ditto.
2	77	84	45	S. E. Cloudy, and a briſk wind.
4	75	84	42	S. E. It looks rainy.
5	—	—	41	S. E. It rains.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. Plenty of air was admitted in the day-time, but the lights were ſhut cloſe down all night.

Monday, March 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	40	S. E. Cloudy; there had been a good deal of rain in the night.
8	75	82	44	S. E. Scattered clouds.
10	80	82	48	S. E. The ſun glimpſes.
12	80	83	51	S. Sunſhine.
1	89	84	51	S.W. Ditto.
2	78	84	50	S.W. Cloudy.
4	72	84	47	S.W. It rains.
5	70	83	40	W. Ditto.
8	—	—	30	N.W. Cloudy, and a briſk wind.

The frames were uncovered at 8 o'clock in the morning,

morning, and covered up in the evening with about three inches thick of hay and mats. In the forenoon I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was admitted from 10 o'clock in the morning till 4 in the afternoon, when the lights were ſhut down for the night.

Tueſday, March 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	S.W.	Cloudy, and near calm.
8	72	82	37	S.W.	Ditto.
10	77	82	39	S.W.	Ditto.
12	70	82	45	S.W.	Ditto.
2	79	82	49	W.	Scattered clouds.
4	82	83	48	W.	Sunſhine.
5	80	83	46	W.	Ditto.
8	—	—	36	W.	Clear, and nearly calm.

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. At 10 o'clock I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom.

To-day I had the north-ſide lining renewed, in doing which the unexhauſted dung of it was laid aſide, and the rotten exhauſted part of it wheeled away, leaving about nine or ten inches of the foundation unremoved, and which I had looſened up with the dung-forks, and then the unexhauſted dung that was laid aſide was well ſhaken and laid upon it, making the lining of an equal height therewith; when that was done, the lining was finiſhed with new dung,

and

and it was raiſed higher up the ſides of the frames than the mould in the inſide of them.

Wedneſday, March 20, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	39	S.W. Cloudy, and but little wind.
8	70	80	44	S.W. Ditto.
10	76	80	48	S.W. The ſun glimmers.
12	75	81	56	S.W. Ditto.
2	77	81	57	S.W. Cloudy.
4	75	81	53	S.W. Ditto.
5	72	81	50	S.W. Gloomy.
7	—	—	46	S.W. Cloudy, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. Air was given at 10 o'clock, and continued till 5 in the evening; when it was taken away for the night. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet.

Thurſday, March 21, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	40	S.W. It rains lightly.
8	76	82	46	S.W. Cloudy and gloomy.
10	72	82	48	S.W. It rains gently.
12	74	82	51	S.W. Ditto.
2	74	82	50	S.W. Ditto.
5	72	82	47	S.W. Cloudy, and nearly calm.
8	—	—	39	S.W. Clear and calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. I went over the plants and ſtopped them, thinned their leaves, and ſet the

the fruit that I found in bloom. The north-ſide lining being ſunk, was raiſed with new dung.

Friday, March 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	38	S. Cloudy, red before ſun-riſing.
8	76	83	42	S. Cloudy, and a briſk wind.
10	74	83	44	S. It rains.
11	75	83	46	S. Ditto.
12	70	83	46	S. Ditto.
2	68	83	45	S. Ditto.
3	67	83	44	S. Fair, cloudy.
4	69	83	44	S. Showery.
8	—	—	42	S. Ditto.

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. The plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was not admitted till 11 o'clock. At 4 o'clock in the afternoon I poured cold water on the flues, and then ſhut the lights cloſe down for the night.

Saturday, March 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	31	W. Clear, and a briſk wind.
8	79	84	34	W. Ditto.
10	82	84	48	W. Sunſhine.
12	88	85	51	S.W. Ditto.
2	86	85	51	S. Ditto.
4	78	86	46	S. Ditto.
6	—	—	37	S. Clouds here and there.

The frames were uncovered about 8 o'clock in the

morning, and covered up at 5 in the evening with about three inches thick of hay and mats. In the forenoon I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was given at 10 o'clock in the morning, and continued all day, and a little left at each light all night.

Sunday, March 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	30	E.	Clear, and a briſk gale of wind.
8	70	83	35	N.E.	Scattered clouds, windy.
10	70	83	37	N.E.	Cloudy and windy.
1	63	82	38	N.E.	It rains lightly.
2	65	82	38	N.E.	Ditto.
4	62	82	37	N.E.	Cloudy and windy.

The frames were uncovered between 8 and 9 o'clock in the morning, and covered up about 5 in the evening with about four inches thick of hay and mats.

Monday, March 25, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	N.E.	It is a cold wet morning.
9	70	82	37	N.E.	Ditto.
10	68	82	40	N.E.	Fair, cloudy, windy.
12	74	82	42	N.E.	Ditto.
2	70	82	41	N.E.	Ditto.
4	68	82	39	N.E.	Ditto.
8	—	—	36	N.E.	Ditto.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. I went over the plants and ſtopped them, thinned their leaves, and ſet the

the fruit in bloſſom. The linings being ſunk, were raiſed with new dung. But little air was given in the day-time, and the lights were ſhut cloſe down all night.

Tueſday, March 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	30	N.E.	Rainy and windy.
7	—	—	30	N.E.	A heavy fall of wet ſnow.
10	74	83	34	N.E.	Windy, cold, and rainy.
12	67	82	35	N.E.	Cloudy, windy, cold.
1	63	82	35	N.E.	Ditto.
2	64	81	35	N.E.	Ditto.
4	65	81	35	N.E.	Ditto.
8	—	—	33	N.E.	Clear, and windy.

The frames were uncovered a little before 10 o'clock in the morning, and covered up at 5 in the afternoon with about five inches thick of hay and mats. Air was admitted for two hours in the middle of the day, and the lights were kept cloſe ſhut down all night.

Wedneſday, March 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	30	N.E.	Cloudy, cold, and windy.
9	72	83	33	N.E.	Ditto.
10	70	83	35	N.E.	Ditto.
12	70	83	38	N.E.	Ditto.
2	80	83	38	N.E.	The ſun glimpſes.
4	74	84	36	N.E.	The wind is fallen.
8	—	—	31	N.E.	Cloudy, and a briſk wind.

The frames were uncovered at 9 o'clock in the morning, and covered up in the evening with about five inches thick of hay and mats. At noon I went over the plants and ſtopped them, thinned their leaves,

and ſet the fruit in bloſſom. But little air was given in the day-time, and the lights were ſhut cloſe down all night.

Thurſday, March 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	29	N. E.	The earth is covered with ſnow, and ſnow continues to fall.
8	76	84	32	N. E.	Sunſhine, near calm.
9	78	84	33	N. E.	Scattered clouds.
10	81	85	38	N. E.	Ditto.
12	81	85	40	N. E.	Cloudy, and a little ſnow falls.
2	87	86	39	N. E.	Sunſhine.
3	87	86	38	N. E.	Ditto.
4	84	87	36	N. E.	Ditto.
9	—	—	24	N. E.	Clear and calm.
10	—	—	23	N. E.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up a little before 6 in the evening with about five inches thick of hay and mats. Air was admitted at 10 o'clock in the morning, and taken away at 5 o'clock in the afternoon. The linings were raiſed with dung freſh from the ſtables. In the forenoon the plants were gone over and ſtopped, their leaves thinned, the weeds picked out, and the fruit in bloſſom were ſet.

Friday,

Friday, March 29, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	26	N. E.	Cloudy.
9	80	87	37	N. E.	The ſun glimmers.
10	87	87	40	N. E.	Ditto.
12	88	88	43	E.	Sunſhine.
2	84	89	44	E.	Ditto.
4	80	89	42	E.	Clouds here and there.
8	—	—	29	E.	Clear and calm.
10	—	—	25	E.	Ditto.

The frames were uncovered about 9 nine o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. About noon I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit that I found in bloom: I then took water eighty degrees warm, and poured plenty of it on the flues, and on the mould next to the flues.

Saturday, March 30, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	23	N. E.	Clear and nearly calm.
8	80	87	28	N. E.	Ditto.
9	82	87	32	N. E.	Sunſhine.
10	90	88	35	N. E.	Ditto.
11	87	89	39	N. E.	Ditto.
12	86	90	42	N. E.	Ditto.
1	90	90	43	N. E.	Ditto.
2	87	90	44	N. E.	Ditto.
4	79	90	45	N. E.	Scattered clouds.
5	82	90	42	N. E.	Ditto.

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening with about

four inches thick of hay and mats. As ſoon as the frames were uncovered, I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was given all day, but the lights were ſhut down all night.

Sunday, March 31, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	25	N. E.	Clear and calm.
8	82	89	30	N. E.	Ditto.
10	90	90	37	N. E.	Sunſhine.
1	87	91	42	N. E.	The ſun ſhines faintly.
2	93	92	44	N. W.	Sunſhine.
4	78	92	42	N. W.	Some clouds, but little wind.
5	82	92	38	N. W.	Ditto, and the ſky looks
6	—	—	36	W.	Ditto. [froſty.
10	—	—	34	W.	Cloudy.

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. Air was admitted plentifully in the day-time, and a little left all night at each light.

Monday, April 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	S.	It ſnows.
9	78	90	36	S.	Snow continues to fall.
10	74	90	37	S. E.	Sleety, ſnow falls.
12	68	89	37	S. E.	It rains.
2	68	88	37	S. E.	Ditto.
3	66	87	37	S. E.	Ditto.
4	65	87	37	S. E.	Ditto.
6	—	—	36	S. E.	Gloomy, and a thick moiſt atmoſphere.

The frames were uncovered about 9 o'clock in the morning,

morning, and covered up about 5 in the evening with about five inches thick of hay and mats. About noon I went over the plants and ſtopped them, and ſet the fruit that I found in bloſſom. The lights were kept ſhut down as cloſe as poſſible all day, and remained ſo all night. The north-ſide lining was raiſed with freſh dung.

Tueſday, April 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	31	W.	The earth is covered with ſnow, and ſnow continues falling.
7	—	—	32	W.	A heavy fall of wet ſnow.
9	—	—	34	N.W.	It rains.
10	75	87	37	N.W.	Fair and cloudy.
12	73	87	39	N.W.	Ditto.
2	68	86	38	W.	Cloudy, and a briſk wind.
4	67	86	37	W.	Ditto.
5	66	85	37	W.	Ditto.
8	—	—	36	W.	Cloudy and dark.

The frames were uncovered a little before 10 o'clock in the morning, and covered up in the evening with about five inches thick of hay and mats. The plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. A little air was admitted in the middle of the day, but the lights were ſhut cloſe down all night.

Wedneſday, April 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	29	W.	Clear, and but little wind.
8	78	86	34	S.W.	Sunſhine.
10	82	86	40	S.W.	Ditto.
11	83	86	47	S.W.	Scattered clouds.
12	76	87	49	S.W.	Ditto.
1	77	88	49	S.W.	Ditto.
3	81	88	48	S.W.	Ditto.
5	82	88	42	S.W.	Clouds here and there.

The frames were uncovered about 8 o'clock in the morning, and covered up at 5 in the afternoon with about four inches thick of hay and mats. In the morning I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was admitted plentifully in the day-time, but the lights were ſhut cloſe down all night.

Thurſday, April 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	33	N.E.	Thin clouds, near calm.
8	82	89	38	N.E.	Ditto.
10	88	90	48	N.E.	The ſun glimmers.
12	84	90	50	N.E.	Ditto.
2	82	90	52	N.E.	Scattered clouds.
4	80	90	48	N.E.	Ditto.
6	—	—	44	N.W.	The ſun looks very red, and the ſky froſty.
9	—	—	39	N.E.	The ſtars appear faintly, nearly calm.

The frames were uncovered a little paſt 8 in the morning, and covered up at 5 in the evening with near

four inches thick of hay and mats. Air was given at 9 o'clock in the morning, and continued till about 4 in the afternoon, when the lights were ſhut down for the night. About noon the plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. When that was done I gave the plants a hearty watering with water about 82 degrees warm; moſt water was given to the mould next to the flues, and ſome was poured on the flues.

Friday, April 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	36	N. E. Cloudy, and but little wind.
8	83	90	44	N. E. Sunſhine.
10	88	91	46	N. E. Ditto.
12	88	92	50	N. E. Ditto.
1	91	92	53	N. E. Ditto.
2	89	92	53	N. E. Ditto.
3	86	93	54	N. E. Ditto.
4	82	91	52	N. E. Ditto.
9	—	—	38	N. E. Clear, and nearly calm.

The frames were uncovered at 8 o'clock in the morning, and covered up between 5 and 6 in the afternoon with about four inches thick of hay and mats. In the morning the plants were gone over and ſtopped, their leaves thinned, the weeds picked out, and the fruit in bloom ſet. Air was given about 9 o'clock in the morning, and taken away about 4 in the afternoon.

Saturday,

Saturday, April 6, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	37	N.E.	Foggy.
9	82	91	40	N.E.	Ditto.
10	87	92	45	N.E.	The ſun glimmers.
11	90	92	46	N.E.	Ditto.
12	87	92	47	N.E.	Sunſhine.
2	90	92	52	E.	Ditto.
4	80	92	50	E.	Ditto.
9	—	—	35	E.	Clear, and near calm.

The frames were uncovered about 9 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. In the morning I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was admitted at 9 o'clock in the morning, and continued all day, and a little left all night at every light.

Sunday, April 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	30	E.	Clear, and a briſk wind.
8	79	89	39	E.	Ditto.
10	92	90	48	E.	Bright ſunſhine.
1	87	92	50	E.	Ditto.
3	84	92	49	E.	Ditto.
4	80	92	47	E.	Ditto.
7	—	—	39	E.	Clear, and a briſk wind.

The frames were uncovered about 8 o'clock in the morning, and covered at 5 in the evening with three inches thick of hay and mats. Plenty of air was given in the day-time, and a little was left during the night.

Monday,

Monday, April 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	30	E. Clear, the froſt white.
8	78	89	39	E. Sunſhine, and a briſk gale
10	82	89	43	E. Ditto. [of wind.
12	80	89	48	E. Ditto.
2	80	90	46	E. Ditto.
5	78	89	43	E. Ditto. wind.
8	—	—	32	E. Clear, and a briſk gale of

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening about 6 o'clock with three inches thick of hay and mats. In the day-time air was admitted plentifully, and a little left all night at each light. In the morning I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloom. At noon the flues were floated with water about 80 degrees warm, and the mould near the flues was watered.

Tueſday, April 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	28	E. Clear, and a briſk wind.
8	79	88	38	E. Sunſhine, windy.
10	85	89	42	E. Ditto.
12	87	90	48	E. Scattered clouds, windy.
2	88	91	47	E. Ditto.
4	85	91	42	E. Ditto.

The frames were uncovered at 8 o'clock in the morning, and covered at 5 in the evening with about three inches thick of hay and mats. The plants were gone over and ſtopped, their leaves thinned,

thinned, the fruit in bloom ſet, and the weeds picked out. Air was admitted plentifully from 9 in the morning till 4 in the afternoon, when the lights were ſhut down for the night.

To-day at noon I held the thermometer in the water in the pond, and it ſtood at 46, and when held in the water in the ſpring, it ſtood at 45; and a thermometer, with its bulb ſix inches deep in the earth on a north wall border, ſtood at 39.

Wedneſday, April 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	29	N. E.	Clear, and near calm.
8	82	90	37	N. E.	Clouds here and there, windy.
10	83	90	43	N. E.	Scattered great ſnowy-
11	80	90	43	N. E.	Ditto. [like clouds.
12	80	90	44	N. E.	Cloudy, and windy.
2	75	90	44	N. E.	Ditto.
5	76	89	43	N. E.	Scattered clouds, which look ſnowy.
8	—	—	36	N. E.	Clear, and a briſk gale of wind.

The frames were uncovered about 8 o'clock in the morning, and covered up between 5 and 6 in the afternoon with about four inches thick of hay and mats. The plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given from 10 in the morning till 4 in the afternoon, and then the lights were ſhut cloſe down.

Thurſday,

Thurſday, April 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	27	N. E.	Thin ſtreaky clouds.
6	—	—	28	N.W.	Cloudy.
8	78	88	36	W.	Ditto.
10	73	87	36	N.W.	Snow falls.
12	75	87	41	N.W.	Cloudy, and a briſk wind.
1	76	87	41	W.	Ditto.
2	77	87	41	N.	Showery.
4	76	83	42	N. E.	Cloudy, and a briſk gale
6	—	—	39	N. E.	Ditto. [of wind.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening between 5 and 6 with about four inches thick of hay and mats. In the forenoon I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom; and about 3 o'clock in the afternoon I gave to each three-light frame about half a hogſhead of water warmed, till it raiſed the thermometer to 82 degrees; and in giving the water, the lights were taken off one at a time, and the water poured all over the plants, flues, and ſides of the frames out of water-pots with roſes on them, in imitation of a heavy ſhower of rain. When the watering was finiſhed, the lights were ſhut down for the night.

Friday

Friday, April 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	N.E.	Cloudy; ſnow had fallen in the night.
8	78	35	36	N.E.	Cloudy, and a briſk wind.
10	75	85	37	N.E.	It rains lightly.
12	78	85	43	N.E.	Cloudy.
2	72	85	41	N.E.	Ditto.
4	72	85	42	N.E.	Ditto.
10	—	—	35	N.E.	Clear, and near calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. The plants were ſtopped, their leaves thinned, and the fruit in bloom ſet. Air was given but for one hour, and that was from 1 to 2 o'clock.

Saturday, April 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	29	N.E.	White froſt, and a thick fog.
8	79	86	37	N.E.	The ſun ſhines faintly.
10	90	87	42	N.E.	Sunſhine.
11	88	87	44	N.E.	Ditto.
1	93	90	48	N.E.	Ditto.
3	96	91	52	N.E.	Ditto.
5	90	90	52	N.E.	Ditto.
10	—	—	46	N.E.	Clouds here and there.

The frames were uncovered about 8 o'clock in the morning, and covered up in the afternoon about 5 with about three inches thick of hay and mats. In the morning I went over the plants and ſtopped them,

them, thinned their leaves, and ſet the fruit that I found in bloſſom. Air was given plentifully in the day-time, but the lights were ſhut cloſe down all night.

Sunday, April 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	40	N.E.	Sunſhine.
8	81	90	42	N.E.	Some clouds.
10	78	90	42	W.	Cloudy, and a cold wind.
11	82	90	42	N.W.	Ditto.
1	82	90	42	N.	Ditto.
2	80	90	40	N.E.	The ſun glimpſes.
4	76	90	41	N.E.	Ditto.
10	—	—	32	N.E.	Clear, and a briſk wind.

The frames were uncovered about 8 o'clock in the morning, and covered up about 5 in the afternoon with three inches thick of hay and mats. Air was admitted at 9 o'clock, and continued all day, and a little left at each light all night.

Monday, April 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	28	S.W.	Streaky clouds, and a briſk wind.
8	67	85	36	S.W.	Clouds here and there.
10	75	85	45	S.W.	Sunſhine, windy.
12	75	85	48	S.W.	Cloudy and windy.
2	64	85	49	S.W.	Ditto.
4	66	85	47	S.W.	Ditto.
9	—	—	42	S.W.	Cloudy, dark, windy.

The frames were uncovered in the morning about 8 o'clock,

8 o'clock, and covered up at 5 in the afternoon with about three inches thick of hay and mats. As ſoon as uncovered I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. Air was continued day and night.

Tueſday, April 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	33	N.	Great ſnowy clouds all over the air.
8	—	—	33	N.	Some ſnow falls.
9	72	84	35	N.	Ditto.
10	75	84	37	N.W.	Scattered clouds.
11	88	85	38	N.W.	Large towering clouds, and ſhowers of ſnow.
12	89	85	40	N.W.	Sunſhine.
2	79	85	38	N.W.	Showers of ſnow.
4	72	85	37	N.W.	Ditto.
8	—	—	29	N.W.	Clear, and but little wind.

The frames were uncovered juſt before 9 in the morning, and covered about 5 o'clock in the afternoon with about four inches thick of hay and mats. At 2 o'clock I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit that were in bloſſom. When that was done, I took water about 80 degrees warm, and poured ſome of it on the flues, and ſome on the mould next to the flues. Air was continued all day, and a little left at each light all night.

Wedneſday

Wedneſday, April 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	28	S.W.	Clear, and a hoar froſt.
8	72	82	32	S.W.	Sunſhine.
10	77	83	45	S.W.	The ſun ſhines faintly.
12	76	83	48	S.W.	The ſky is overcaſt with lofty foggy clouds, and the ſun appears faintly.
2	68	82	40	S.W.	It rains lightly.
3	65	82	38	S.W.	Ditto.
4	64	82	37	S.W.	Windy, and it continues raining.
6	—	—	35	S.	High wind, and it rains.

The frames were uncovered about 8 o'clock in the morning, and covered up about 5 in the evening with about three inches thick of hay and mats. About noon I went over the plants and ſtopped them, thinned out ſome of the oldeſt leaves, picked off the ſhowing fruit where too thick, and ſet thoſe in bloſſom. Air was continued till near 4 in the afternoon, when the lights were ſhut down, and remained ſo all night.

Thurſday, April 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	44	S.W.	Windy, and a ſmall rain.
8	70	80	48	S.W.	Cloudy and windy.
10	72	80	50	S.W.	Ditto.
12	74	81	53	S.W.	Showery, windy.
2	70	81	53	S.W.	Ditto.
3	71	81	53	S.W.	Great clouds, ſtormy.
5	74	81	48	S.W.	The ſun ſhines, and it rains.
7	—	—	44	S.W.	Great ſhowery clouds.
9	—	—	44	S.W.	Heavy ſhowers.

The frames were uncovered about half paſt 8

in the morning, and covered up about 5 in the afternoon with three inches thick of hay and mats. At noon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. The north ſide lining was raiſed with new dung. But little air was given in the day-time, and leſs during the night.

Friday, April 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	36	N.W.	Cloudy, and a cold wind.
9	75	82	40	N.W.	Ditto. [clouds.
10	73	82	41	N.W.	Great towering ſnowy
11	81	82	38	N.W.	A heavy ſhower of hail.
1	76	82	37	N.W.	Guſts of wind, and ſhow-
2	75	82	38	N.W.	Ditto. [ers of hail.
4	70	83	37	N.	Great froſty-like clouds.
7	—	—	32	N.	Clear, and but little wind.
9	—	—	29	N.	Ditto.

The frames were uncovered at 9 in the morning, and covered up between 4 and 5 o'clock in the afternoon with about three inches thick of hay and mats. Air was admitted day and night. In the forenoon I ſtopped the plants, thinned their leaves, and ſet the fruit that I found in bloom.

Saturday, April 20, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	27	W.	Thin clouds in the hori-
8	72	81	32	W.	Sunſhine. [zon.
10	87	82	42	N.	Scattered clouds, near
12	86	84	46	N.E.	Ditto. [calm.
1	87	85	48	N.E.	Sunſhine.
4	85	85	47	N.E.	Clouds here and there.
6	—	—	40	N.E.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the

the morning, and covered up about 5 in the afternoon with hay and mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Plenty of air was given in the day-time, and the lights were ſhut cloſe down all night.

Sunday, April 21, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	40	S. Thin ſtreaky clouds.
8	78	85	47	S. Ditto.
10	81	85	49	S. The ſun ſhines faintly.
11	88	85	53	S.W. Ditto.
1	90	86	55	S.W. Sunſhine.
2	82	86	54	S.W. Ditto.
4	86	86	53	S.W. Ditto.
9	—	—	39	S.E. Clear.

The frames were uncovered about 8 o'clock in the morning, and covered up a little before 6 in the evening with double mats. Air was admitted in the day-time plentifully, and a little left all night.

Monday, April 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
5	—	—	34	S.E. The air is overcaſt with thin clouds.
8	70	80	46	S.E. Sunſhine.
10	82	81	51	S.E. Ditto.
12	84	84	55	S.E. The ſun ſhines faintly.
2	86	85	55	S.E. Ditto.
4	80	84	54	S.E. Sunſhine.
8	—	—	39	E. Clear and calm.

The frames were uncovered about half paſt 7 o'clock

in the morning, and covered at 5 in the afternoon with double mats. In the morning I went over the plants and ſtopped them, thinned their leaves, and ſet the fruit in bloſſom. In the afternoon the plants were watered moderately with water warmed to about 80 degrees. Air was admitted plentifully in the day-time, and a little left all night.

Tueſday, April 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	34	S. E.	Clear, and a white froſt.
6	—	—	40	S. E.	Thin clouds near the hori-
7	72	80	47	S. E.	Sunſhine. [zon.
10	80	82	52	S. E.	Ditto.
12	87	84	57	S. E.	Ditto.
2	85	84	59	S. E.	Ditto.
3	80	84	61	S. E.	The ſun ſhines faintly.
4	79	84	59	S. E.	Ditto.
6	—	—	56	S. E.	Ditto.
8	—	—	46	S. E.	Thin high clouds and lower ſmall black ones come ſlowly from the ſouth-weſt.

The frames were uncovered at 7 o'clock in the morning, and covered about 6 in the evening with double mats. The plants were ſtopped, their leaves thinned, the weeds picked out, the fruit in bloſſom ſet, and where the fruit were ſhowing too thick, the worſt and weakeſt of them were nipped off. Air was admitted day and night.

Wedneſday,

Wedneſday, April 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	42	W.	Cloudy.
8	75	81	50	W.	Ditto.
10	90	83	57	W.	The ſun ſhines faintly.
12	84	84	62	N.	Smoaky-like clouds all over the air.
2	82	84	61	N.	The ſun glimmers.
3	80	84	58	N.	Great black clouds in the ſouth-weſt, and it thunders.
4	75	83	55	N. E.	Cloudy, and nearly calm.
8	—	—	44	N. E.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up at 5 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloom ſet. At four in the afternoon water was ſprinkled all round the inſides of the frames, and on the bare parts of the flues, and on the mould next to the flues. The lights were then ſhut down for the night.

Thurſday, April 25, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	40	N.	Cloudy and gloomy.
9	72	81	42	N.	It rains lightly.
10	70	81	43	N.	Ditto.
12	70	81	47	N.	Gloomy.
2	77	81	42	N.	Cloudy.
4	75	81	48	N.	Ditto.
8	—	—	43	N.	The moon ſhines faintly.

The frames were uncovered at 9 o'clock in the

morning, and covered up at 5 in the afternoon with double mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given at 10 o'clock in the morning, and continued till 4 in the afternoon, when the lights were ſhut down for the night.

Friday, April 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	42	W.	Clouds here and there.
7	69	79	47	W.	Cloudy.
10	84	79	60	W.	The ſun glimpſes.
12	82	80	62	W.	Ditto.
2	75	81	61	W.	Ditto.
3	79	81	58	S.W.	Ditto.
6	72	81	53	S.W.	Ditto.
8	—	—	44	S.W.	Clouds in the horizon.

The frames were uncovered at 7 o'clock in the morning, and covered up at 6 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloom ſet. Air was given plentifully till 4 o'clock. To-day I had a freſh lining applied to the ſouth ſide of the bed. There was no heat in the old lining, it was therefore all wheeled away except a little dung which was lately laid on the top of it, and which was laid aſide, and ſhaken into the foundation of the new lining. The new lining was made with dung taken from among the cow-cribs. To-day I began to cut melons.

Saturday,

Saturday, April 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	43	S. E.	Cloudy, and but little wind.
8	70	78	50	S. E.	Ditto.
10	75	79	52	S. E.	Cloudy, and a briſk wind.
12	75	79	57	S. E.	Ditto.
2	77	80	56	S. E.	Gloomy.
4	74	80	56	S. E.	Cloudy, and a ſtrong gale of wind.
6	—	—	48	S. E.	Ditto.

The frames were uncovered at 8 o'clock in the morning, and covered up about 5 in the afternoon with double mats. In the morning I ſtopped the plants, thinned their leaves, and ſet the fruit that I found in bloſſom. A little air was admitted in the day-time, and continued all night.

Sunday, April 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	40	N. E.	Cloudy, and a cold wind.
8	70	77	45	N. E.	Ditto.
10	79	78	49	N. E.	Light clouds.
11	84	80	52	N. E.	The ſun ſhines faintly.
1	82	82	56	N. E.	Scattered ſmoaky-like clouds.
3	80	81	58	N. E.	Ditto.
5	82	81	57	N. E.	Sunſhine.
8	—	—	42	N. E.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with mats. Air was admitted day and night.

Monday, April 29, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	36	S.W.	Sunſhine.
7	70	80	45	S.W.	The ſun ſhines faintly.
10	81	81	53	S.W.	Thin clouds, and a briſk gale of wind.
12	78	81	53	S.W.	Cloudy and windy.
2	70	81	53	S.W.	Windy, and a ſmall driving rain.
4	68	81	52	S.W.	Ditto.
8	—	—	45	S.W.	Clear, and a briſk wind.

The frames were uncovered at 7 o'clock in the [illegible], and covered between 5 and 6 in the afternoon [illegible] mats. In the morning I ſtopped the plants, thinned out ſome of their leaves, and ſet the fruit in bloſſom. The ſouth ſide lining, being ſunk, was raiſed with hot dung. Air was continued day and night.

Tueſday, April 30, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	38	S.W.	Clear, and but little wind.
6	—	—	42	S.W.	Ditto.
8	69	80	49	S.W.	Flying clouds; the ſun glimmers.
10	80	81	55	S.W.	Ditto.
12	80	83	59	S.W.	Cloudy, it looks rainy.
3	77	83	58	S.W.	Some drops of rain fall.
5	70	83	57	S.	Windy, and ſome rain.
8	—	—	50	S.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up about 5 in the afternoon with double mats. In the morning I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Air was admitted in the day-time, but the lights were ſhut cloſe down all night.

Wedneſday,

Wedneſday, May 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	45	W.	Flying clouds, wind high; there had been a fine rain in the night.
8	70	82	50	W.	Flying clouds, and light
10	77	83	55	W.	Ditto. [ſhowers.
12	75	83	59	S.W.	Cloudy, windy.
2	77	83	58	S.W.	Ditto. [then.
4	70	84	55	S.W.	The ſun ſhines now and
6	—	—	49	S.W.	Showers of rain; the wind is fallen.

The frames were uncovered at 8 o'clock in the morning, and covered up at 5 in the afternoon with double mats. In the morning I ſtopped the plants, picked off the ſhowing fruit where they were too thick, thinned their leaves, and ſet the fruit that I found in bloſſom. At 3 o'clock water about 60 degrees warm was poured on every part of the flues. Air was admitted day and night.

Thurſday, May 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	43	W.	Thin clouds cover the ſky.
8	70	82	50	W.	Showery.
10	71	82	51	W.	Ditto. [of wind.
12	72	82	45	W.	Heavy ſhowers, and guſts
1	73	82	48	W.	A heavy ſhower of large hail.
2	80	83	48	N.W.	Windy, and great ſhow-
3	75	83	47	N.W.	Ditto. [ery clouds.
5	70	83	45	N.W.	Ditto.
8	—	—	41	N.W.	Clouds here and there.

The frames were uncovered a little paſt 8 in

in the morning, and covered up in the afternoon about 5 o'clock with double mats. In the forenoon the plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night. The ſouth ſide lining, being ſunk, was raiſed with freſh dung.

Friday, May 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	34	W.	Clear, and nearly calm.
8	67	81	43	W.	Scattered clouds.
10	80	82	49	N.W.	Ditto.
12	85	83	52	N.W.	Scattered great ſnowy-like clouds.
2	76	83	53	N.W.	Cloudy, and a briſk wind.
4	73	83	52	N.W.	Ditto.
6	68	83	50	N.W.	Ditto.
8	—	—	47	N.W.	Cloudy, nearly calm.

The frames were uncovered a little before 8 o'clock in the morning, and covered up about 6 in the evening with double mats. In the morning I ſtopped the plants, ſet the fruit in bloſſom, and thinned their leaves. Air was continued day and night.

Saturday, May 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	40	S.W.	The ſun appears through foggy clouds.
8	73	83	48	S.W.	The ſun ſhines faintly.
10	80	84	56	S.W.	Scattered clouds.
11	83	84	60	S.W.	Ditto.
12	78	84	59	S.W.	Cloudy.
2	80	84	57	S.W.	Ditto.
4	73	84	53	S.W.	Ditto.
8	—	—	45	S.W.	Ditto.

The frames were uncovered about 8 o'clock in the

the morning, and covered up in the afternoon at 5 o'clock with mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given in the day-time, but the lights were ſhut down all night.

Sunday, May 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	44	S.W.	Cloudy; there had been rain in the night.
6	—	—	48	S.W.	Cloudy, windy.
8	72	83	50	W.	Scattered clouds, windy.
10	75	83	49	W.	Cloudy, windy.
11	77	84	50	W.	Ditto.
1	76	85	55	N.W.	Ditto.
2	80	85	56	N.W.	Scattered clouds.
4	75	85	53	N.W.	Ditto.
10	—	—	40	N.W.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up about 5 in the afternoon with double mats. Air was admitted in the day-time, but the lights were ſhut cloſe down about 5 in the afternoon.

Monday, May 6, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	36	N.W.	Clear, and nearly calm.
7	69	82	40	N.W.	Sunſhine.
10	84	85	49	N.W.	Ditto.
12	87	86	56	N.W.	Duſty-like clouds ariſe
2	80	86	55	N.	Cloudy. [in the north.
4	76	86	54	N.	Ditto.
6	—	—	51	N.	Ditto.

The frames were uncovered about 7 o'clock in the morning,

morning, and covered up at 5 in the evening with double mats. Air was given in the day-time, but none during the night.

Tueſday, May 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	40	N. Cloudy, gloomy.
8	74	84	44	N. Scattered clouds, and light
10	80	84	48	N. Ditto. [ſhowers.
12	75	85	52	N. Ditto.
2	75	85	50	N. Cloudy, nearly calm.
4	77	85	48	N. Showery.
8	—	—	45	N. Clear; the air looks froſty.

The frames were uncovered at 8 o'clock in the morning, and covered up between 5 and 6 in the evening with mats. In the forenoon the plants were ſtopped, their leaves thinned, the fruit in bloſſom ſet, and the weeds picked out of the mould. About noon the plants were well watered, with water near 80 degrees warm. The water was given out of pots with roſes on them, and it was poured in between the leaves, ſo that the leaves were not much wetted nor weighed down thereby; but every part of the mould was well watered, and plenty was poured on the flues. Air was admitted from 9 o'clock in the morning till 5 in the afternoon, when the lights were ſhut down for the night. The ſouth ſide lining being ſunk was raiſed with hot dung.

Wedneſday,

Wednesday, May 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	41	E.	Foggy, nearly calm.
8	77	83	49	E.	The sun glimmers.
10	83	84	54	E.	Scattered clouds.
12	80	85	58	S. E.	Ditto.
2	78	86	60	S.W.	Ditto.
4	76	86	55	S.W.	Cloudy, nearly calm.
8	—	—	48	S.W.	Clear, nearly calm.

The frames were uncovered before 8 o'clock in the morning, and covered between 5 and 6 in the evening with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted at 8 o'clock in the morning, and continued day and night.

Thurſday, May 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	45	S.W.	It rains, and there had been a good deal in the night.
8	68	82	50	S.W.	Cloudy, gloomy.
10	69	82	51	S.W.	Showers of rain.
12	79	83	59	S.W.	The ſun glimpſes.
2	81	84	61	S.W.	Ditto.
4	78	84	60	S.W.	Scattered clouds.
5	71	84	57	S.W.	Ditto.
6	—	—	54	S.W.	Showery.

The frames were uncovered about 8 o'clock in the morning, and covered about 5 in the afternoon with double mats. In the afternoon I ſtopped the plants, thinned out ſome of their leaves, and ſet the fruit that I found in bloſſom. Air was continued day and night.

Friday, May 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	40	S.W.	Cloudy, and nearly calm.
8	72	82	50	S.W.	Ditto.
10	79	83	56	S.	Ditto.
12	80	83	61	S.	Ditto.
1	79	83	61	S.	It rains a little.
2	80	83	61	S.	The ſun ſhines faintly.
5	75	83	58	S.	Cloudy, gloomy.
8	—	—	49	S.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up between 5 and 6 in the afternoon with double mats. At noon I ſtopped the plants, ſet the fruit in bloſſom, and thinned their leaves. In the afternoon the tiles and bricks that lay above the ſide flues for the plants to run on, were taken out, and all the flues covered with mould, and made on a level with the mould that was in the bed before, and put cloſe home to the ſides of the frames, and preſſed down gently, making it of an equal firmneſs with the mould that the plants were growing in; the plants were then trained out on the freſh mould, and the lights ſhut cloſe down for the night.

Saturday,

Saturday, May 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	49	S.	Cloudy, and nearly calm.
8	71	82	58	S.	Showery-looking clouds.
10	77	82	60	S. E.	The ſun appears faintly.
12	81	84	67	S. E.	Ditto.
2	80	84	66	E.	Ditto.
5	68	83	58	E.	Since 2 o'clock there have been light ſhowers of rain.
6	—	—	57	E.	Clouds, and the ſun appears through them.
8	—	—	53	E.	Gloomy.

The frames were uncovered about 8 o'clock in the morning, and covered up between 5 and 6 in the evening with double mats. In the forenoon I ſtopped the plants, thinned their leaves, and ſet the fruit that I found in bloſſom. Air was admitted day and night.

Sunday, May 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	50	E.	Cloudy, and nearly calm.
7	70	82	55	E.	Sunſhine.
9	89	84	60	E.	Ditto.
10	89	85	65	E.	Ditto.
12	90	86	71	N.E.	Light clouds here and
1	87	87	75	N. E.	Ditto. [there.
2	84	87	75	N. E.	Bright ſunſhine.
4	82	87	71	N. E.	Ditto.
8	—	—	60	N. E.	Clear, and nearly calm.

The frames were uncovered about 7 o'clock in the morning, and covered up about 6 in the afternoon

with mats. Air was admitted plentifully in the day-time, and about an inch left at each light all night.

Monday, May 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	48	N. E.	Much dew, misty, and a brisk wind.
8	70	84	52	N. E.	Light foggy clouds.
10	88	85	60	N. E.	Sunshine, brisk gale of
12	87	87	67	N. E.	Ditto. [wind.
1	82	87	68	N. E.	Ditto.
2	87	87	71	N. E.	Bright sunshine.
3	89	88	72	N. E.	Ditto.
5	83	86	68	N. E.	Sunshine, windy.
6	—	—	63	E.	Clouds here and there.

The frames were uncovered about 8 o'clock in the morning, and covered up in the afternoon about half past 5 with double mats. In the morning I went over the plants and stopped them, thinned their leaves, set the fruit in blossom, and picked off the worst fruit where they were showing too thick. About 3 o'clock the plants were well watered with water which had stood in the sun till it was 70 degrees warm. Great plenty of air was admitted in the day-time, and a little was left at each light all night.

Tuesday,

Tuesday, May 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	42	N. E	Clear, and a brisk wind.
7	69	83	48	N. E	Sunshine, windy.
9	78	83	52	N E.	Ditto.
10	84	85	55	N. E.	Ditto.
12	85	87	58	N. E.	Ditto.
2	81	87	60	N E.	Ditto.
4	83	87	59	N. E.	Clouds here and there.
5	78	87	58	N. E.	Ditto.
8	—	—	50	N. E.	Clear, and nearly calm.

The frames were uncovered about 7 o'clock in the morning, and covered up a little before 6 in the afternoon with double mats. In the morning the plants were stopped, their leaves thinned, and the fruit in blossom set. Air was given plentifully day and night.

Wednesday, May 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	47	W.	Clear, and a brisk air of
7	73	85	50	W.	Sunshine. [wind.
9	82	85	55	N.W.	Ditto.
10	85	86	59	N.W.	Ditto.
12	83	87	66	N.W.	The air is overcast with light clouds.
2	83	87	63	N.W.	Cloudy, and a brisk wind.
5	74	86	59	N.	Ditto.
7	—	—	53	N. E.	Ditto.

The frames were uncovered about 7 o'clock in the morning, and covered up between 5 and 6 in the afternoon with double mats. In the morning the

plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given plentifully all the day, and a little left at each light all night.

Thurſday, May 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	70	84	40	N. E. Light flying clouds, briſk gale of wind.
9	82	85	50	N. E. Sunſhine, windy.
10	84	86	55	N. E. Ditto.
12	84	87	58	N. E. Ditto.
1	82	87	58	N. E. Ditto.
2	84	87	60	N. E. The ſky is overcaſt with light clouds.
4	73	79	61	N. E. The wind is fallen.
6	78	81	59	N. E. Light clouds, nearly calm.
8	—	—	55	N. E. Ditto.

The frames were uncovered at 6 o'clock in the morning, and covered up at 6 in the afternoon with double mats. In the morning the plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. The plants were ſhaded with thin mats from about 12 till 2 o'clock, and about 3 o'clock they were well watered: The water was about 65 degrees warm, and was poured all over the plants, and againſt the ſides of the frames to waſh and ſweeten them; to each three-light frame of plants was given a hogſhead of water. Air was continued all the day, and a little left all night.

Friday,

Friday, May 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	73	83	50	W.	Foggy clouds all over [the air.
9	79	84	58	N W.	Ditto.
10	81	84	62	N.W.	Ditto.
12	76	84	63	N.W.	Ditto.
2	80	85	63	N.W.	Ditto.
4	87	86	65	N.W.	The ſun ſhines now and then.
7	—	—	52	N.W.	It has rained ſince 6 [o'clock.
8	—	—	52	N.W.	Fair, hazy.

The frames were uncovered about 6 o'clock in the morning, and covered up between 5 and 6 in the evening with double mats. In the morning I went over the plants and ſtopped them, thinned their leaves, ſet the fruit that I found in bloom, and rubbed off ſeveral young fruit where they were ſhowing too thick. Air was admitted all the day, but the lights were ſhut cloſe down all night.

Saturday, May 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	73	85	46	N. E.	Cloudy, and a briſk wind.
8	75	85	50	N. E.	The ſun ſhines faintly.
10	79	85	55	N. E.	Scattered clouds.
12	81	86	58	N. E.	Cloudy.
1	80	86	63	N. E.	Ditto.
4	75	85	59	N. E.	Showery-like clouds.
6	77	86	52	N. E.	Gloomy.
8	—	—	49	N. E.	Light clouds.

The frames were uncovered about 6 o'clock in the morning, and covered up at 6 o'clock in the afternoon

noon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given in the day-time, and the lights ſhut down all night.

Sunday, May 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	41	N.	Cloudy, and a cold wind.
8	70	84	44	N.	Gloomy and cold.
10	75	84	49	N.	Light clouds.
12	78	84	55	N.E.	Ditto.
2	82	85	56	N.E.	Ditto.
4	78	85	53	N.E.	Cloudy and windy.
5	83	86	51	N.E.	Sunſhine.
9	—	—	42	N.E.	Clear, and a briſk wind.

The frames were uncovered about 8 o'clock in the morning, and covered up about half paſt 5 in the afternoon with double mats. But little air was admitted in the day-time, and the lights were ſhut down all night.

Monday, May 20, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	35	N.E.	Clear, and a white froſt.
7	71	83	42	N.E.	Sunſhine, and a briſk wind.
9	78	83	49	N.E.	Ditto.
10	80	84	52	N.E.	Scattered light clouds.
12	87	86	59	N.E.	Sunſhine.
2	85	86	60	N.E.	Ditto.
4	90	86	58	N.E.	Small clouds here and there.
5	87	87	56	N.E.	Bright ſunſhine.

The frames were uncovered about 7 o'clock in the morning, and covered up between 5 and 6 in the

the afternoon with double mats. In the morning I ſtopped the plants, thinned their leaves, ſet the fruit in bloſſom, and thinned the fruit where they were ſhowing too thick. Air was given plentifully in the day-time, but the lights were ſhut cloſe down all night.

Tueſday, May 21, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	41	N.E.	Foggy clouds come from the north-eaſt.
7	74	84	45	N.E.	Sunſhine, and a briſk
9	80	84	53	N.E.	Ditto. [wind.
10	87	55	58	N.E.	Ditto.
11	90	86	62	N.E.	Ditto.
12	90	87	65	N.E.	Ditto.
2	89	88	66	N.E.	Scattered clouds, windy.
4	93	88	64	N.E.	Ditto.
6	—	—	55	N.E.	Clear, and windy.
8	—	—	49	N.E.	Ditto.

The frames were uncovered about 7 o'clock in the morning, and covered up between 4 and 5 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Plenty of air was admitted in the day-time, and a little left all night at each light. The linings being ſunk were raiſed all round with hot dung.

At noon I held among the water in the ſpring, a thermometer, and it fell, and ſtood at 45, and when I held it in the water running from the pipe it roſe, and ſtood at 52. I then plunged it in the pond

in the water expoſed to the ſun and air, and it roſe, and ſtood at 64. After that I ſet the thermometer on the ground upright, on a ſouth border expoſed to the ſun, cloſe by a row of peas in bloſſom, and it ſoon roſe, and ſtood at 100. In walking about the fields between 12 and 1 o'clock with a thermometer hanging in my hand, it kept riſing and falling between 65 and 70 degrees.

Wedneſday, May 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	44	N. E. Cloudy, and a cold wind.
9	74	85	48	N. E. Ditto.
10	84	86	50	N. E. The ſun ſhines faintly.
12	83	86	56	N E. Thin clouds.
2	85	87	57	N. E. Sunſhine.
4	79	86	55	N. E. Cloudy, and a briſk gale
6	75	86	51	N. E. Ditto. [of wind.
8	—	—	46	N. E. Ditto.

The frames were uncovered juſt before 9 o'clock in the morning, and covered up in the afternoon about 6 with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Between 2 and 3 o'clock plenty of water was poured upon the mould above the flues, but there was none given to the mould near the ſtems of the plants. Air was given in the day-time, but the lights were ſhut cloſe down all night.

Thurſday,

Thurſday, May 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	42	N.E.	Foggy light clouds.
8	75	84	49	N.E.	Ditto.
10	85	85	57	N.E.	Sunſhine.
12	87	87	66	N.E.	Clouds here and there.
2	84	87	67	N.E.	Ditto.
3	85	87	66	N.E.	Ditto.
4	77	87	62	N.E.	Sunſhine.
5	75	87	62	N.E.	Scattered clouds, near calm.
9	—	—	49	N.E.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up between 5 and 6 in the evening with double mats. In the afternoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted plentifully in the day-time, and a little left all night at each light.

Friday, May 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	44	N.E.	Foggy, and nearly calm.
9	72	84	49	N.E.	Ditto.
10	74	84	49	N.E.	Foggy clouds, and a briſk wind.
12	76	84	49	N.E.	Ditto.
2	80	84	56	N.E.	Ditto.
4	85	85	57	N.E.	Scattered clouds.
5	90	86	57	N.E.	Ditto.
8	—	—	48	N.E.	Clear, and a briſk gale of wind.

The frames were uncovered about 9 o'clock in the morning, and covered up in the afternoon between 5 and 6 with double mats. In the afternoon I

ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Air was admitted till 4 o'clock in the afternoon, when the lights were ſhut cloſe down for the night.

Saturday, May 25, 1793.

Hours.	S.Th.	F.Th.	Ther.	Wind.
5	—	—	36	N. E. Foggy flying clouds.
7	72	84	44	N. E. Sunſhine.
10	82	85	53	N. E. Scattered clouds, and a briſk wind.
12	87	87	60	N. E. Sunſhine.
2	85	87	60	N. E. Scattered white clouds.
4	82	87	58	N E Ditto.
5	90	87	56	N. E. Thin clouds cover the ſky.
8	—	—	51	N. E. Ditto, and a briſk gale of wind.

The frames were uncovered about 7 o'clock in the morning, and covered up between 5 and 6 in the afternoon with double mats. In the morning the linings were raiſed with freſh dung, the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. In the day-time air was admitted plentifully, and a little was left all night at each light.

Sunday,

Sunday, May 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	43	N. E.	Bright ſunſhine.
7	74	85	44	N. E.	Ditto.
9	85	87	51	N. E.	Ditto.
10	90	87	54	N. E.	Ditto.
1	80	87	68	N. E.	The ſky is overcaſt with light clouds.
2	83	87	67	N. E.	Thin clouds, and a briſk gale of wind.
3	80	87	62	N. E.	Gloomy.
4	74	87	55	N. E.	Ditto.
8	—	—	48	N. E.	Clear, and a briſk gale of wind.

The frames were uncovered about 7 o'clock in the morning, and covered up about 5 in the afternoon with double mats. Air was given plentifully in the day-time, and a little left all night.

Monday, May 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	43	N. E.	Foggy clouds, and a briſk wind.
7	72	84	45	N. E.	Ditto.
8	80	85	48	N. E.	Ditto.
11	90	87	61	N. E.	Sunſhine.
1	86	87	69	N. E.	The air is overcaſt with light clouds.
2	80	87	70	N. E.	Ditto.
3	65	70	68	N. E.	Cloudy, and near calm.
4	75	74	64	N. E.	Gloomy; the clouds look rainy.
9	—	—	55	N. E.	Clouds here and there.

The frames were uncovered about 7 o'clock in the morning, and covered up between 5 and 6 in the afternoon

noon with about 3 inches thick of hay and mats. In the morning the plants were ſtopped, their leaves thinned, the weeds picked out, and the fruit in bloſſom ſet. Between 2 and 3 o'clock I gave the plants a plentiful watering with water about 65 degrees warm. I gave to each three-light frame about half a hogſhead, and when the watering was finiſhed, the lights were ſhut cloſe down for the night.

Tueſday, May 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
5	—	—	45	S.W. Foggy, and a briſk wind.
7	79	85	53	W. Cloudy.
10	83	86	62	W. The ſun glimpſes.
12	85	87	65	N.W. Cloudy, and a briſk wind.
2	83	87	67	N.W. Cloudy, and nearly calm.
3	88	87	66	N.W. Scattered clouds.
5	81	88	62	N.W. Ditto.
6	—	—	59	N.W. Sunſhine.
8	—	—	53	N.W. Clear, and nearly calm.

The frames were uncovered about 7 o'clock in the morning, and covered up in the afternoon about half paſt 5 with double mats. In the afternoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted about 8 o'clock in the morning, and increaſed gradually, and at 5 o'clock in the afternoon the lights were ſhut cloſe down for the night. The ſouth ſide lining, being ſunk, was raiſed with hot dung.

Wedneſday,

Wedneſday, May 29, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	72	86	42	N. Sunſhine, and a briſk wind
8	73	86	44	N. Great ſhowery-like clouds
10	81	87	48	N.W. Scattered clouds. [ariſe.
12	79	87	54	N.W. Ditto.
2	82	88	55	N.W. Ditto.
4	79	88	54	N.W. Cloudy, and a briſk wind.
5	81	88	51	N.W. Ditto.
8	—	—	46	N.W. Clouds here and there; nearly calm.

The frames were uncovered about 6 o'clock in the morning, and covered up at half paſt 5 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloom ſet. About 4 o'clock in the afternoon water was poured plentifully all round about againſt the inſides of the frames to ſweeten the flues, ſo that therefrom a kindly ſteam might ariſe during the night to nouriſh and invigorate the plants. Air was admitted at 7 o'clock in the morning, and continued all day, and a little left all night

Thurſday,

Thurſday, May 30, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	38	N.	Clear, and a briſk wind.
6	68	85	39	N.	Sunſhine.
8	76	85	45	N.W.	Scattered clouds.
10	80	86	46	N.W.	Ditto.
12	88	87	52	N.W.	Sunſhine.
1	89	88	54	N.W.	Ditto.
2	88	89	54	N.W.	Scattered clouds.
4	87	89	52	N.W.	Ditto.
5	86	90	49	N.W.	Stormy, and great white clouds.
7	—	—	46	N.W.	Clear, and nearly calm.
8	—	—	43	N.E.	Ditto.

The frames were uncovered about 6 o'clock in the morning, and covered up about 5 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted till near 5 o'clock in the afternoon, when the lights were ſhut cloſe down for the night.

Friday, May 31, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	33	S.W.	Clear, and a white froſt.
7	73	86	41	W.	Clouds here and there.
10	86	87	50	W.	Scattered clouds.
12	83	88	57	W.	Cloudy, and a briſk wind.
2	85	88	58	W.	Scattered clouds; a few drops of rain fall.
4	91	89	59	W.	Scattered clouds.
5	89	90	57	W.	Ditto.
8	—	—	50	N.W.	Great black clouds in the ſouth-weſt.

The frames were uncovered at 7 o'clock in the morning,

morning, and covered up about 5 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given about 8 o'clock in the morning, and continued till 5 in the afternoon, when the lights were ſhut cloſe down for the night.

Saturday, June 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	86	44	W.	Clear, and a briſk wind.
8	80	87	50	S.W.	Sunſhine.
10	85	88	57	S.	Scattered clouds.
12	89	89	61	S.	Sunſhine.
1	89	91	64	S.	Ditto
2	89	91	65	S.	Thin ſtreaky clouds.
4	79	90	64	S.	Ditto.
6	—	—	61	S.	Ditto.
8	—	—	55	S.	Cloudy, gloomy, calm.

The frames were uncovered at 6 o'clock in the morning, and covered up about 6 in the afternoon with double mats. In the morning I went over the plants and ſtopped them, thinned out their leaves, ſet the fruit in bloſſom, and nipped off here and there ſeveral of the young fruit where I found them ſet too thick. Air was admitted a little before 8 o'clock in the morning, and continued till 4 in the afternoon; then I poured water plentifully on the mould above the flues, and againſt the ſides of the frames. The water raiſed the thermometer to 65 degrees.

Sunday,

Sunday, June 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	53	S.	Cloudy and windy.
8	77	87	58	S.	Ditto.
10	75	87	59	S.	Ditto.
11	80	87	60	S.	Ditto.
2	76	87	62	S. E.	Cloudy; a few drops of rain fall.
4	74	87	60	S. E.	Cloudy, windy.
9	—	—	54	S. E.	The wind is fallen.

The frames were uncovered about 8 o'clock in the morning, and covered up about 6 in the evening with double mats. Air was given from 8 in the morning till 4 in the afternoon, when the lights were ſhut down for the night.

Monday, June 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	78	86	54	S.	Clear, and nearly calm.
8	79	86	59	S.W.	Clouds here and there.
10	82	87	69	S.W.	Sunſhine.
11	84	88	69	S.W.	Ditto.
12	85	88	69	S.W.	Scattered clouds.
2	83	88	70	S.W.	Ditto.
4	95	89	68	S.W.	Sunſhine, near calm.
7	—	—	62	S.W.	Ditto.
9	—	—	54	S.W.	Clear and calm.

The frames were uncovered about 6 o'clock in the morning, and covered up a little before 6 in the afternoon with mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. In the afternoon, between 3 and 4 o'clock, I gave each light of plants two pot-fulls of water

about 63 degrees warm, all over their leaves. Air was given at 7 o'clock in the morning, and continued till 7 in the evening, when it was taken away for the night.

Tueſday, June 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
5	—	—	55	S.E. Thin light clouds here
6	76	87	57	S.E. Ditto. [and there.
8	80	88	62	S. Ditto.
10	82	88	70	S. Ditto.
11	84	89	74	S. Scattered clouds.
12	85	89	78	S. The ſun ſhines faintly.
2	83	89	75	S. Cloudy, and nearly calm.
3	86	89	76	S. The ſun glimmers.
4	85	89	73	S.W. Ditto.
6	—	—	68	S.W. Cloudy, and nearly calm.
9	—	—	59	S.W. Ditto.

The frames were uncovered at 6 o'clock in the morning, and covered up about half paſt 5 in the afternoon with mats. In the morning I ſtopped the plants, thinned their leaves, picked off ſeveral ſmall fruit where they were ſet too thick, and ſet the fruit in bloſſom. Air was given at 7 o'clock in the morning, and continued till between 4 and 5 in the afternoon, when the lights were ſhut cloſe down for the night.

Wedneſday,

Wedneſday, June 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	52	S.W.	Light clouds here and
6	76	86	55	S.W.	Sunſhine. [there.
8	85	88	69	S. E.	Clouds here and there.
10	86	89	74	S. E.	The ſun ſhines faintly.
11	79	88	70	S.	Cloudy, gloomy; a few drops of rain fall.
12	82	88	71	S.	A light ſhower of rain.
2	83	89	73	S.W.	Cloudy, and nearly calm.
3	82	89	73	S.	Ditto.
4	84	89	71	S.	Sunſhine.
5	85	89	69	S.W.	Clouds here and there.
9	—	—	59	S.	Clear, and nearly calm.

The frames were uncovered at 6 o'clock in the morning, and covered up juſt before 6 in the afternoon with ſingle mats.

In the morning I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Air was admitted at 7 o'clock in the morning, continued all day, and a little left at each light all night.

Thurſday, June 6, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	52	S.W.	Cloudy, and a briſk wind.
6	72	86	55	S.W.	Ditto.
8	80	86	60	S.W.	The ſun ſhines faintly.
10	83	87	65	S.W.	Ditto.
11	83	87	71	S.W.	Cloudy.
12	75	87	68	S.W.	A few drops of rain fall.
2	75	87	66	S.W.	Gloomy.
4	76	87	62	S.W.	It rains lightly.
5	75	87	60	S.	It rains gently.
9	—	—	55	S.	Cloudy, and a briſk wind.

The frames were uncovered at 6 o'clock in the morning,

morning, and covered up a little before 6 in the afternoon with ſingle mats. In the morning I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. At noon plenty of water was poured upon the mould above the flues, and againſt the ſides of the frames, and juſt before covering up the plants were ſprinkled all over till their leaves were well wetted. Air was given all day till about 6 o'clock in the afternoon, when the lights were ſhut down for the night.

Friday, June 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	—	—	55	S.W.	Clear in the weſt, cloudy in the eaſt.
6	72	84	56	S.W.	Cloudy, gloomy.
8	77	84	58	S.W.	Scattered clouds, nearly calm.
10	83	85	62	S.W.	Ditto.
11	86	86	66	S.W.	Ditto.
12	85	87	71	S.W.	Great clouds, and guſts of wind.
1	85	87	71	S.W.	Ditto.
2	85	87	70	S.W.	Ditto.
4	80	87	68	S.W.	Sunſhine.
8	—	—	57	S.W.	Clear, and a briſk wind.
9	—	—	53	S.W.	Ditto.

The frames were uncovered about 6 o'clock in the morning, but there was no covering put on in the evening. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. The linings were raiſed all round with hot dung. At 5 o'clock in the afternoon with water about 67 degrees warm, I watered the plants all over till their leaves were well wetted.

Saturday, June 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	84	56	S.W.	Cloudy, and a briſk wind.
8	78	84	59	S.W.	Ditto.
10	80	85	61	S.W.	Showery-like clouds.
12	85	85	64	S W.	Windy, and large clouds here and there.
2	83	85	64	S.W.	A light ſhower.
5	84	8›	62	S.W.	Squally.
7	76	86	58	S.W.	Cloudy and windy.
9	—	—	56	S.W.	Showery-like clouds.

In the morning the plants were ſtopped, their leaves thinned, the weeds picked out, and the fruit in bloſſom ſet. Air was given between 7 and 8 in the morning, and continued till about 5 in the afternoon, when the plants were ſprinkled with water, and the lights ſhut cloſe down for the night. To-day we gathered peas for the firſt time this ſeaſon; they were ſown in December on a ſouth-wall border, in a row 6 feet diſtance from the wall.

Sunday, June 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	68	83	50	S.W.	Clear, and a briſk gale of wind.
8	83	83	54	S.W.	Clouds come ſwiftly from the ſouth-weſt.
10	82	83	58	S.W.	Cloudy and windy.
1	82	84	64	S.W.	Ditto.
2	83	84	65	S.W.	The ſun ſhines now and
4	88	86	64	S.W.	Sunſhine. [then.
8	77	86	55	S.W.	Cloudshere and there; the wind is fallen.

Air was admitted at 8 o'clock in the morning, and continued

continued till between 4 and 5 in the afternoon, when the lights were ſhut down for the night.

Monday, June 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	65	83	48	S.W.	Clear, and a briſk wind.
8	80	83	56	S.W.	Clouds come ſwiftly from the ſouth-weſt.
10	78	83	61	S.W.	Scattered clouds.
12	80	85	64	S.W.	Ditto.
2	82	85	66	S.W.	Clouds here and there.
4	79	85	64	S.W.	The ſun glimpſes.
6	67	82	58	S.W.	Ditto.
8	—	—	52	S.W.	Some clouds, nearly calm.

Air was admitted about 8 o'clock in the morning, when I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Between 5 and 6 in the afternoon I gave the plants of each three-light frame about half a hogſhead of water, which I poured all over their leaves out of wide roſed water-pots; but I poured on moſt above the flues and againſt the ſides of the frames; the water was 64 degrees warm. When the watering was finiſhed the lights were ſhut cloſe down, and covered up with about 4 inches thick of hay and mats.

Tueſday, June 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	77	84	50	S.W.	The ſky is covered with thin ſtreaky clouds.
8	81	85	59	S.W.	Cloudy.
10	82	85	63	S.W.	Ditto.
12	85	86	66	S.W.	The ſun ſhines.
2	87	87	69	S.W.	Clouds here and there.
4	88	88	67	S.W.	Ditto.
6	86	88	64	S.W.	Cloudy, and nearly calm.
9	—	—	55	S.W.	Ditto.

The frames were uncovered about 6 o'clock in the morning, and covered up in the afternoon about half paſt 5 with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given at 7 o'clock in the morning, and continued till 5 in the afternoon, when the lights were ſhut down for the night.

Wedneſday, June 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	74	86	48	W.	Clear, and a briſk wind.
8	79	86	52	W.	Scattered clouds.
10	83	87	57	W.	Cloudy.
12	89	88	65	N.W.	Light clouds.
2	86	88	64	N.W.	Ditto.
4	88	89	62	N.W.	Scattered clouds.
6	—	—	59	N.W.	Ditto.
9	—	—	55	N.W.	Cloudy, and nearly calm.

The frames were uncovered about 6 o'clock in the morning, and covered up about half paſt 5 with double mats. In the morning I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Air

was

was admitted from 7 o'clock till 3 in the afternoon, when the plants were ſprinkled with clean water, and the lights ſhut down for the night.

Thurſday, June 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	50	N. E.	Cloudy, and a briſk wind.
8	80	87	55	N. E.	Ditto.
10	83	87	58	N. E.	Ditto.
12	83	87	59	N. E.	Light clouds.
2	80	87	59	N. E.	Ditto
4	78	87	55	N. E.	Cloudy, and a briſk gale
6	77	87	52	N. E.	Ditto. [of wind.
9	—	—	49	N. E.	Ditto.

The frames were uncovered about 7 o'clock in the morning, and covered up about 5 in the afternoon with double mats. About noon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given at 8 o'clock in the morning, and taken away at 3 in the afternoon. To-day I had a new lining applied to the north ſide of the bed. The old lining being exhauſted, there was no heat in it, but a warmth, and that derived from the ſouth ſide lining; therefore I had it all removed, except only about ſix inches of the top of it, which was not quite exhauſted, and which I had laid in the foundation of the new lining. The new lining was made of a mixture of cow and horſe dung, which had lain in a heap for a few days till it had become very warm.

Friday, June 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	72	84	46	N. Cloudy, and a briſk gale of wind.
8	74	84	48	N. Ditto.
10	85	85	54	N. Ditto.
12	83	86	58	N. Ditto.
2	82	86	57	N. Ditto.
4	83	86	55	N. The ſun glimmers.
5	82	87	55	N. Ditto.
8	—	—	48	N. Cloudy, and nearly calm.

The frames were uncovered about 6 o'clock in the morning, and covered up about half paſt 5 in the afternoon with double mats. In the morning I ſtopped the plants, thinned their leaves, picked off the young fruit where they were ſet too thick, and ſet the fruit in bloſſom.

Saturday, June 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	72	85	45	N.W. Thick cloſe clouds cover the ſky.
8	72	85	48	N.W. Ditto.
10	80	85	54	N.W. The ſun appears faintly.
12	83	86	61	N.W. Ditto.
2	87	88	60	W. Sunſhine.
4	89	89	61	S.W. Ditto.
6	84	89	55	S.W. Gloomy; the clouds look rainy.
8	79	89	50	S.W. Ditto.

The frames were uncovered about 6 o'clock in the morning, but no covering was put on for the night. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted about 9 o'clock in the morning, and continued

till between 4 and 5 in the afternoon, when the lights were ſhut down for the night. The north ſide lining, being ſunk, was raiſed with freſh dung, and was made rather higher than the ſurface of the earth on the bed.

Sunday, June 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	86	50	W.	Light clouds, and a briſk
8	79	86	58	W.	Ditto. [wind.
10	83	87	62	W.	Ditto.
11	87	88	66	W.	The ſun ſhines faintly.
1	88	89	70	W.	Ditto.
2	86	89	69	W.	Ditto.
4	80	89	66	W.	Cloudy, and a briſk gale of
6	—	—	55	W.	It rains a little. [wind.
9	—	—	53	W.	Fair, cloudy.

Air was given about 8 o'clock in the morning, and taken away at 4 in the afternoon. The frames were covered up at 5 in the afternoon with double mats.

Monday, June 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	75	83	55	N.W.	Cloudy, and a briſk wind.
8	76	88	56	N.W.	A light ſhower of rain.
10	85	89	62	N.W.	The ſun glimpſes.
12	86	90	63	N.W.	Scattered clouds, windy.
1	70	78	69	W.	Ditto.
2	84	84	67	W.	Flying clouds, windy.
4	86	86	64	W.	Ditto.
9	—	—	55	W.	Clear, and a briſk gale of wind.

The frames were uncovered at 6 o'clock in the

morning, and covered up about half paſt 5 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Between 12 and 1 o'clock I gave the plants a good ſoaking of water about 62 degrees warm; it was poured on all over their leaves out of wide roſed water-pots. Air was given about 8 o'clock in the morning, and continued till 4 in the afternoon, when the lights were ſhut cloſe down for the night.

Tueſday, June 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	73	89	45	N.W. Clear, and a ſtrong gale of wind.
9	80	89	50	N.W. Scattered great clouds.
10	83	90	54	N.W. Ditto.
12	85	91	58	N.W. Ditto.
2	89	93	61	N.W. Light clouds.
5	85	93	59	N.W. Sunſhine.
9	—	—	53	N.W. Gloomy.

The frames were uncovered at 6 o'clock in the morning, and covered up about half paſt 5 in the afternoon with double mats. In the morning I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Air was admitted between 8 and 9 o'clock in the morning, and continued till about 4 in the afternoon, when the lights were ſhut down for the night.

Wedneſday,

Wedneſday, June 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	76	91	52	W.	Cloudy; there had been a ſhower in the night.
9	80	92	56	W.	A drizzling rain.
10	78	92	55	W.	It rains gently.
12	88	93	55	W.	The ſun glimpſes.
2	86	93	51	N.	A light ſhower.
5	89	93	52	N.	Scattered clouds.
9	—	—	49	N.E.	Cloudy, and nearly calm.

The frames were uncovered about 6 o'clock in the morning, and covered up at 5 in the afternoon with double mats. In the afternoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted about 8 o'clock in the morning, and taken away about half paſt 4 in the afternoon.

Thurſday, June 20, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	47	N.	Cloudy, and a cold wind.
7	76	91	49	N.	Ditto.
10	76	91	50	N.W.	Ditto.
12	78	91	50	N.W.	Ditto.
2	80	91	52	N.W.	Ditto.
4	80	91	52	N.W.	Ditto.
5	81	91	53	N.W.	Thin clouds, nearly calm.
9	—	—	46	N.W.	Ditto.

The frames were uncovered about 7 o'clock in the morning, and covered up about half paſt 5 in the afternoon with mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. But little air was given in the day-time, and at

4 in

4 in the afternoon the lights were ſhut down for the night. The north ſide lining, being ſunk, was raiſed with new dung.

Friday, June 21, 1793.

Hours.	S.Th.	F.Th.	Ther.	Wind.	
6	72	89	45	N.	Clear, and nearly calm.
8	82	89	51	N.	The ſun ſhines faintly.
10	90	90	56	N.W.	Scattered clouds.
11	98	92	60	N.W.	Sunſhine.
12	90	93	63	N.W.	Scattered light clouds.
2	88	93	64	W.	Ditto.
4	85	93	64	W.	Ditto.
9	—	—	55	W.	Some clouds, nearly calm.

The frames were uncovered at 6 o'clock in the morning, and covered up about 5 in the afternoon with mats. In the morning I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Air was admitted at 8 o'clock in the morning, and increaſed plentifully, and a little left at each light all night.

Saturday, June 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	50	W.	Cloudy, and a briſk gale
8	70	88	53	W.	Ditto. [of wind.
10	70	88	55	N.W.	A light ſhower.
12	84	89	58	N.W.	Cloudy.
2	85	90	60	N.W.	Ditto.
4	83	91	59	N.W.	The ſun glimpſes.
8	—	—	53	N.	Gloomy.

The frames were uncovered about 8 o'clock in the morning,

morning, and covered up between 5 and 6 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, the weeds picked out, and the fruit in bloſſom ſet. Air was continued day and night. About 11 o'clock to each three-light frame of plants I gave about half a hogſhead of water, which was from 60 to 65 degrees warm; moſt of it was poured on above the flues and againſt the ſides of the frames, but the leaves of the plants were wetted as little as poſſible. To-day we gathered ſtrawberries in the open ground for the firſt time this ſeaſon.

Sunday, June 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	73	89	45	N.W.	Clear, and a briſk gale of
10	85	90	57	N W.	Scattered clouds. [wind.
11	88	91	57	N W.	Sunſhine.
1	90	93	62	N.W.	Scattered clouds.
2	86	93	61	N.W.	Ditto.
6	80	93	61	N.W.	Ditto.
8	78	92	55	N.W.	Cloudy, calm.

The frames were uncovered about half paſt 6 in the morning, and they were left uncovered all night. Air was continued day and night.

Monday,

Monday, June 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	70	88	50	W. Cloudy, and a few drops of rain fall.
8	72	88	55	W. Cloudy, gloomy.
10	80	89	62	W. The ſun glimpſes.
12	74	89	62	W. A ſmall rain.
2	73	89	56	W. Ditto.
4	75	89	57	W. Cloudy, and a briſk gale of wind.
8	—	—	53	W. Cloudy, nearly calm.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. The linings, being ſunk, were raiſed all round with freſh dung. The lights were covered up between 5 and 6 o'clock in the afternoon with double mats. Air was admitted till 4, and then the lights were ſhut down till 8 o'clock in the evening, when a little air was admitted at each light for the night.

Tueſday, June 25, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	73	88	53	W. Cloudy.
8	76	88	59	W. Scattered clouds.
10	82	90	68	W. Ditto.
12	84	90	71	W. Cloudy, and nearly calm.
2	82	90	70	W. Gloomy.
3	81	91	69	W. Ditto.
6	77	91	63	S.W. Ditto.
9	—	—	57	S.W. Ditto.

The frames were uncovered at 6 o'clock in the morning, and covered up about 6 in the afternoon with ſingle mats. In the morning the plants were ſtopped,

ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Wedneſday, June 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	67	88	58	W.	Cloudy, and a briſk wind; there had been a light rain in the night.
8	73	88	63	W.	Cloudy, and a briſk wind.
10	84	89	69	W.	Scattered clouds.
12	85	90	71	W.	Ditto.
2	84	91	73	W.	Sunſhine.
3	84	91	72	W.	Scattered clouds.
4	83	91	74	W.	Sunſhine.
6	80	91	67	W.	Ditto.
9	—	—	59	W.	Clear, and a briſk wind.

The frames were uncovered about 6 o'clock in the morning, and left without covering all night. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Plenty of air was given all day, and ſome left all night. The linings, being ſunk, were raiſed with long dung.

Thurſday, June 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	62	87	49	W.	Clear, and a briſk wind.
8	80	88	56	W.	Scattered light clouds.
10	85	90	69	W.	Ditto.
12	88	91	73	W.	Ditto.
2	85	92	74	S.W.	Ditto.
3	86	92	75	S.W.	Ditto.
4	82	92	71	S.W.	Ditto.
9	—	—	56	S.W.	Clear, and nearly calm.

About noon the plants were gone over and ſtop-

ped, their leaves thinned, and the fruit in bloſſom ſet, and at 3 o'clock water about 72 degrees warm was poured in all round the ſides of the frames. Air was admitted plentifully till 5 in the afternoon, when the lights were ſhut down till 8, and then a little air was given for the night.

Friday, June 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	68	87	56	S.W.	Thin clouds.
8	74	88	60	S.W.	Ditto.
10	80	89	63	S.W.	Showery-like clouds.
12	85	90	67	S.W.	Cloudy, and a briſk gale of wind.
2	89	91	71	S.W.	Light clouds.
4	86	92	68	S.W.	Sunſhine.
6	—	—	65	S.W.	Thin clouds cover the ſky.
9	—	—	56	S.W.	Ditto.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued till 5 in the afternoon, when the lights were ſhut down till 9, and then a little air was admitted for the night. At 6 o'clock in the evening the frames were covered up with ſingle mats.

Saturday,

Saturday, June 29, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	76	91	56	S.	Cloudy, and a ſtrong gale
8	76	91	58	S.	Ditto. [of wind.
10	77	91	62	S.	Light ſhowers.
12	76	91	64	S.	Flying clouds, and a ſtrong
2	82	92	65	S.W.	Ditto. [gale of wind.
4	90	93	67	S.W.	Sunſhine, windy.
9	—	—	55	S.W.	Cloudy and windy.

The frames were uncovered at 6 o'clock in the morning. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Sunday, June 30, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	71	89	55	W.	Cloudy, and a ſtrong gale of wind.
8	70	90	60	W.	Flying clouds, windy.
10	80	90	65	W.	Ditto.
12	85	91	69	W.	A light ſhower of rain.
2	83	92	63	W.	Windy, and flying clouds.
5	82	92	66	W.	Ditto.
9	—	—	56	W.	Cloudy, the wind is fallen.

Air was continued all day, and the lights were ſhut down all night.

Monday,

Monday, July 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	75	90	58	S.W.	Cloudy and windy.
8	76	90	60	S.W.	Ditto.
10	80	90	62	S.W.	A drizzling rain.
12	76	92	70	S.W.	Light clouds.
2	78	92	68	S.W.	A ſmall ſhower.
4	80	92	67	S.W.	Scattered clouds.
9	—	—	56	S.W.	Clear, and nearly calm.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted at 6 o'clock in the morning, and continued day and night.

Tueſday, July 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	69	88	53	W.	Light clouds, and a briſk wind.
8	78	88	58	W.	Windy and cloudy.
10	72	89	63	W.	Ditto.
12	80	90	70	W.	Scattered clouds, windy.
1	81	91	71	W.	Ditto.
2	80	91	69	W.	Ditto.
5	71	91	66	W.	Sunſhine, windy.
9	—	—	55	W.	Clear, and nearly calm.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted all the day plentifully, and a little left at each light all night.

Wedneſday,

Wedneſday, July 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	68	87	51	W.	Clear, and a briſk wind.
8	80	88	58	W.	Sunſhine.
10	85	89	67	W.	Scattered clouds.
12	85	91	73	W.	Ditto.
1	83	92	76	W.	The air is overcaſt.
2	82	92	74	W.	Thin clouds cover the
3	83	92	75	S.W.	Ditto. [ſky.
4	80	92	74	S.W.	Ditto.
6	75	91	68	S.W.	Ditto.
9	—	—	60	S.W.	Cloudy, and a briſk wind.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. About 4 o'clock in the afternoon water 65 degrees warm was poured againſt the ſides of the frames all round about, to moiſten the flues and ſweeten the air. Air was continued all day, and a little left all night.

Thurſday, July 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	67	87	57	S.W.	Cloudy, and a briſk wind.
8	78	88	62	S.W.	A few drops of rain fall.
10	80	89	69	S W.	Ditto.
11	78	88	71	S.W.	Cloudy and windy.
12	77	88	69	S.W.	Ditto.
2	80	85	73	S.W.	The ſun glimmers.
4	78	86	71	S.W.	Ditto.
6	85	87	69	S.W.	Cloudy, and a ſtrong gale of wind.

To-day about noon I had about two inches thick of leaf mould ſifted fine, laid over all the ſurface of the bed among the plants; it was laid in with the

hand carefully, and many of the oldeſt ſhoots were covered with it: When that was done I gave the plants a moderate watering all over their leaves, with water about 66 degrees warm. Air was given till 4 o'clock, when the lights were ſhut down till 6, and then a little air was admitted, and the lights covered up for the night with double mats. The linings being ſunk below the upper courſe of bricks were raiſed with moiſt dung.

Friday, July 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	75	87	61	S.W. Thin clouds, and a briſk
8	79	87	67	S.W. Ditto. [gale of wind.
10	83	88	75	S.W. Sunſhine, and a ſtrong gale of wind.
12	90	90	81	S.W. Scattered clouds, windy.
1	89	91	78	S.W. Ditto.
2	94	92	80	S.W. Ditto.
4	92	92	80	S.W. Ditto.
5	88	92	78	S.W. Ditto.
8	82	92	70	S.W. Clear, and nearly calm.

The frames were uncovered at 6 o'clock in the morning, and then the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted plentifully all day till 8 o'clock in the evening, when the lights were ſhut cloſe down for the night.

Saturday,

Saturday, July 6, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	78	90	63	W.	Foggy low clouds, a briſk wind, and no dew.
8	80	90	68	W.	Bright ſunſhine, and a
10	88	92	80	W.	Ditto. [briſk wind.
11	90	93	83	W.	Ditto.
12	93	94	85	S.W.	Ditto.
1	96	95	84	S.W.	Ditto.
2	99	96	84	S.W.	Small clouds here and there, nearly calm.
4	87	96	86	S.W.	Ditto.
4½	96	96	88	S.W.	Ditto.
6	86	95	80	S.W.	Clear and calm.
9	—	—	71	S.W.	Ditto.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was plentifully admitted all day, and ſome left all night. Between 5 and 6 in the afternoon I gave to each frame of plants 6 ſmall pots of water 75 degrees warm, which I poured all over their leaves in imitation of a ſhower of rain. To-day we gathered cherries for the firſt time this ſummer; they grew on an eaſt aſpect, but the tree is planted on the weſt ſide of the wall, and its branches are trained over the wall on the eaſt ſide, and there the fruit ripens before thoſe on the ſame tree, on the weſt aſpect.

Sunday, July 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	77	92	65	S.	Bright ſunſhine, not a cloud
8	88	93	72	S.	Ditto. [to be ſeen.
10	89	94	83	S.	Sunſhine.
12	90	95	87	S.W.	Ditto.
1	91	95	89	S.W.	Ditto.
2	90	95	90	S.W.	Ditto.
4	93	96	88	S.W	Ditto.
5	95	96	86	S.W.	Ditto.
9	—	—	75	W.	Clear, and nearly calm.

Air was admitted plentifully day and night. The plants were ſhaded from about 11 o'clock till between 2 and 3 in the afternoon with thin mats.

Monday, July 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	76	93	63	N. E.	Clear, and nearly calm.
8	84	94	69	N. E.	Light flying foggy clouds.
10	92	94	80	N. E.	Sunſhine, and a briſk gale
12	105	96	82	N. E.	Ditto. [of wind.
2	102	98	80	N. E.	Ditto.
4	95	98	80	N. E.	Ditto.
6	82	97	74	N. E.	Ditto.
9	—	—	62	N. E.	Clear, and a briſk gale of wind.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given all day plentifully, but the lights were ſhut down in the evening for the night. To-day the water in the ſprings lowered the thermometer to 50.

Tueſday

Tueſday, July 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	77	92	60	E. Thick foggy clouds, and a briſk gale of wind.
8	84	93	70	E. Sunſhine, windy.
9	70	73	72	E. Ditto.
10	82	84	74	E. Ditto.
12	95	87	76	E. Ditto.
2	92	90	75	E. Ditto.
4	90	91	73	E. Ditto.
5	82	91	72	E. Ditto.
9	—	—	61	E. Clear, and a briſk wind.

Between 8 and 9 o'clock in the morning the plants were well watered with water 67 degrees warm. It was poured all over their leaves out of wide roſed water-pots; to each three-light frame was given about a hogſhead. Air was given all day, till 5 o'clock in the afternoon, when the lights were ſhut down for the night.

Wedneſday, July 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
5	74	91	57	E. Foggy, and nearly calm.
6	77	91	62	E. The fog becomes thin.
8	84	92	71	E. Sunſhine.
10	96	93	80	E. Ditto.
12	94	94	84	E. Ditto.
2	94	95	85	E. Ditto.
5	93	95	79	E. Ditto.
9	—	—	62	E. Clouds here and there.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given all day plentifully, and ſome left all night at every light.

Thurſday, July 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	77	93	65	N. E.	Cloudy in the ſouth and weſt, and clear in the north and eaſt.
8	84	93	72	N. E.	Clouds here and there.
10	94	94	80	N. E.	Sunſhine, and a gentle breeze of wind.
12	100	95	82	E.	Ditto.
2	95	96	81	E.	Ditto.
5	90	96	77	E.	Clouds here and there.
7	86	95	74	E.	Ditto.
9	—	—	67	E.	Clear, and nearly calm.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted till between 5 and 6 in the afternoon, when the plants were gently watered all over their leaves with water 77 degrees warm, and then the lights were ſhut cloſe down.

Friday, July 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	77	92	62	N. E.	Clear, and a gentle air of wind.
8	89	93	72	N. E.	Sunſhine, and a briſk gale
10	95	94	80	N. E.	Ditto. [of wind.
12	92	96	85	N. E.	Ditto.
2	90	96	84	N. E.	Ditto.
4	91	96	81	N. E.	Ditto.
5	85	96	78	N. E.	Ditto.
7	78	95	72	N. E.	Ditto.
9	—	—	64	N. E.	Clear and calm.

In the morning the plants were ſtopped, their leaves

leaves thinned, and the fruit in bloſſom ſet. The plants were ſhaded with thin mats from between 11 and 12 o'clock till about half paſt 2 in the afternoon. Air was admitted day and night plentifully.

Saturday, July 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
5	66	90	55	E. Calm, and not a cloud to be ſeen.
6	67	90	57	E. Bright ſunſhine.
8	80	91	68	E. Sunſhine, and a briſk gale of wind.
10	84	92	80	E. Ditto.
12	87	93	82	E. Ditto.
2	88	94	81	E. Ditto.
4	90	95	79	E. Ditto.
8	72	94	65	E. Clear and calm.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. About 7 o'clock in the morning I poured water 68 degrees warm, againſt the ſides of the frames all round about, to moiſten and ſweeten the flues. Air was admitted plentifully all day, and continued all night. The plants were ſhaded with thin mats, from about 12 o'clock till 2 in the afternoon. To-day we gathered ripe gooſeberries for the firſt time this ſummer.

Sunday, July 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	61	89	53	N.E.	Bright ſunſhine, nearly calm. [wind.
8	76	89	65	N.E.	Sunſhine, and a briſk
10	90	90	74	N.E.	Ditto.
12	95	91	82	N E.	Bright ſunſhine.
1	96	91	81	N.E.	Ditto.
3	94	93	80	N.E.	Ditto.
5	90	94	78	E.	Ditto.
9	—	—	60	E.	

The plants were ſhaded with thin mats from about noon till between 2 and 3 o'clock in the afternoon. Air was continued night and day.

Monday, July 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	62	88	55	E.	Clear and calm.
8	80	89	68	E.	Bright ſunſhine.
10	85	90	77	E.	Ditto.
12	98	92	82	E.	Light high clouds here and
2	94	93	81	E.	Ditto. [there.
4	90	93	82	E.	Sunſhine.
9	—	—	61	E.	Clear and calm.

The plants were gone over in the morning and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given plentifully all day, and continued all night.

Tueſday,

Tueſday, July 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
5	63	88	53	S. E.	Clear and calm.
8	87	90	73	S.	Sunſhine, nearly calm.
10	89	91	81	S.W.	Ditto.
12	85	91	87	S.W.	Thin high clouds, and a briſk gale of wind.
2	86	91	90	S.W.	Sunſhine.
4	85	91	87	S.W.	Ditto.
7	82	92	78	S.W.	Thin ſtreaky clouds.
9	—	—	72	S.	Clouds in the horizon.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Between 8 and 9 o'clock in the morning I gave the plants a gentle watering with water about 65 degrees warm; it was given all over their leaves, but moſt was poured on above the flues. The plants were ſhaded with thin mats from about 11 o'clock till between 2 and 3 in the afternoon. Air was admitted all day plentifully, and ſome left all night. To-day we gathered raſpberries and currants for the firſt time this ſeaſon.

Wedneſday, July 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	66	88	59	S.W.	Clear, and a briſk wind.
8	78	88	68	S.W.	Light flying clouds.
10	76	88	72	S.W.	The air is overcaſt.
12	81	89	78	S.W.	The ſun glimmers.
2	87	90	80	S.W.	Flying light clouds.
4	88	91	78	S.W.	Ditto.
7	78	91	71	S.W.	Clouds in the horizon; nearly calm.
9	—	—	65	S.W.	The moon appears faintly.

In the morning the plants were gone over and ſtopped, their

their leaves thinned, and the fruit in bloſſom ſet. Plenty of air was continued day and night.

Thurſday, July 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	70	88	60	S.W.	Cloudy; there had been a ſhower of rain in the night.
8	75	88	64	S.W.	Gloomy.
12	79	87	72	S.W.	Cloudy; it looks rainy.
2	74	87	65	W.	A drizzling rain.
4	73	87	64	W.	It has rained gently ſince 2 o'clock.
6	71	87	62	W.	Fair, cloudy.
9	—	—	56	W.	Clear, and a briſk wind.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Between 9 and 10 o'clock in the morning the plants were gently watered all over their leaves with water about 65 degrees warm. Air was continued all day, and a little left all night.

Friday, July 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	70	84	57	W.	A heavy ſhower of rain.
8	71	84	58	W.	Cloudy, and a briſk wind.
10	74	81	65	W.	Ditto.
12	91	82	68	W.	The ſun glimmers.
2	90	83	72	S.W.	Scattered clouds.
4	87	85	70	S.W.	Ditto.
6	82	85	68	S.W.	Ditto.
9	—	—	55	S.W.	Clouds here and there.

In the morning the plants were ſtopped, their leaves

leaves thinned, and the fruit in bloſſom ſet. Between 8 and 9 o'clock in the morning the plants were well watered with water 63 degrees warm; it was poured on all over their leaves and ſurface of the bed, but moſt was let fall above the flues. But little air was admitted in the day-time, and about half paſt 5 in the afternoon the lights were ſhut cloſe down, and covered up with double mats for the night.

Saturday, July 20, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	86	52	W.	Cloudy, and a briſk wind.
9	75	86	59	W.	Ditto.
10	82	87	63	W.	Scattered great clouds.
12	79	87	59	N.W.	Light ſhowers.
2	84	88	63	N.W.	Showery clouds.
4	82	88	56	N.W.	Gentle ſhowers.
6	—	—	57	N.W.	Showery clouds; nearly calm.
9	—	—	52	N.W.	Clear, and calm.

The frames were uncovered about 6 o'clock in the morning, and covered up juſt before 6 in the afternoon with double mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted about 8 o'clock in the morning, and continued till about 5 in the afternoon, when the lights were ſhut down for the night.

Sunday,

Sunday, July 21, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	74	86	50	W.	Sunſhine, calm.
8	80	86	55	N.W.	Clouds here and there.
10	94	88	62	N.W.	Scattered ſmoky-like [clouds.
12	88	89	65	N.W.	Ditto.
2	92	90	67	N.W.	Ditto.
5	81	90	66	N.W.	Cloudy, and nearly calm.
9	—	—	56	N.W.	Ditto.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with double mats. Air was given at 8 o'clock in the morning, and taken away about 5 in the afternoon.

Monday, July 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	79	89	54	S.W.	Cloudy, and a briſk wind.
8	81	89	60	S.W.	Ditto.
10	78	86	68	S.W.	Ditto.
12	85	88	73	S.W.	The ſun glimmers.
2	82	89	73	S.W.	Ditto.
4	82	89	71	S.W.	Light clouds, and a briſk wind.
9	—	—	59	S.W.	Cloudy, nearly calm.

The frames were uncovered at 6 o'clock in the morning, and covered up about 6 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Between 8 and 9 o'clock in the morning I gave to each three-light frame about half a hogſhead of water, which was 60 degrees warm, and I poured it all over the leaves of the plants, and on every part of the inſides of the frames. Air was given at 8 o'clock

o'clock in the morning, and taken away at 4 in the afternoon.

Tuesday, July 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	78	89	60	S.	Thick foggy clouds come from the south.
8	82	89	66	S.	Light showers.
10	83	89	68	S.	Gloomy.
12	84	90	71	S.W.	Ditto.
2	83	90	68	S.W.	Cloudy, and nearly calm.
4	80	90	68	S.W.	Ditto.
9	—	—	62	S.W.	Ditto.

The frames were uncovered at 6 o'clock in the morning, and covered up in the evening with single mats. In the forenoon the plants were stopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted in the morning, and continued day and night.

Wedneſday, July 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	78	90	61	S.W.	Thick foggy clouds come from the ſouth-weſt.
8	80	90	68	S.W.	Scattered light large
10	88	91	73	S.W.	Ditto. [clouds.
12	95	92	79	S.W.	Ditto.
1	96	92	80	S.W.	Ditto.
2	99	94	78	W.	Cloudy, and nearly calm.
4	94	94	78	W.	Ditto.
7	—	—	71	S.	Ditto.
9	—	—	67	S.	Clear and calm.

The frames were uncovered at 6 o'clock in the morning,

morning, and covered up in the evening with mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet Air was continued all day, and a finger-breadth left all night at every light.

Thurſday, July 25, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	77	91	63	S.W.	Cloudy, and a briſk wind.
8	80	91	68	S.W.	Ditto.
10	86	91	72	S.W.	Cloudy, and near calm.
12	85	91	78	W.	Gloomy.
2	83	87	76	W.	The ſun glimmers.
4	83	88	78	S.W.	Sunſhine.
6	80	89	74	S.W.	Clouds here and there.
9	—	—	63	S.W.	Clear and calm.

The frames were uncovered at 6 o'clock in the morning, and then the plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Between 12 and 1 o'clock the plants were watered all over their leaves with water about 70 degrees warm. Air was given day and night plentifully.

Friday, July 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	68	86	60	S.W.	Speckled thin clouds.
8	76	86	70	S.W.	Clouds here and there.
10	82	87	73	S.W.	The ſun ſhines faintly.
12	85	88	77	S.W.	Scattered clouds.
1	85	89	79	S W.	Ditto.
2	83	89	78	S.W.	Ditto.
4	79	89	75	S.W.	Cloudy, and nearly calm.

In the morning the plants were ſtopped, their leaves thinned,

thinned, and the fruit in bloſſom ſet. Air was given plentifully day and night. To-day I began to cut cucumbers from plants which were raiſed in the ſpring in a hot-bed, and planted out on a ridge of warm dung under hand-lights. The plants are remarkably ſtrong and healthy, and have the appearance of producing a plentiful crop. The water in the ſprings lowered the thermometer to-day to 52. This morning we began to reap rye, and alſo peaſe.

Saturday, July 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	76	86	62	E.	Foggy, and a briſk air of
8	73	86	62	S.E.	It begins to rain. [wind.
10	67	85	61	S.E.	It continues to rain.
12	66	84	71	S.E.	It rains gently.
2	70	84	60	S.E.	It rains heavily.
4	72	84	60	S.E.	Ditto.
6	68	85	58	S.E.	Ditto.
8	65	85	54	N.E.	It rains a little.

Between 8 and 9 o'clock in the morning the lights were taken off the plants to let the rain fall on them, and at 1 o'clock they were put on again, and a little air admitted till 8 o'clock in the evening, when the lights were ſhut down for the night.

Sunday,

Sunday, July 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	68	83	52	N. E.	Gloomy, and a few drops of rain fall.
8	74	84	57	N. E.	Light ſhowers.
10	77	84	57	N. E.	Ditto.
12	79	85	63	N. E.	Cloudy, and a briſk wind.
4	74	85	59	N. E.	Ditto.
8	—	—	55	N.	Ditto.

Air was admitted at 8 o'clock in the morning, and continued day and night.

Monday, July 29, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	63	83	50	N.W.	Cloudy, and a briſk wind.
8	69	83	54	N.W.	Cloudy, and nearly calm.
10	73	83	57	N.W.	Ditto.
12	81	84	63	N.W.	Ditto.
2	82	85	64	W.	Sunſhine.
3	85	85	66	W.	Scattered clouds.
5	70	85	63	W.	Sunſhine.
9	—	—	52	W.	Clear and calm.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Tueſday,

Tueſday, July 30, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	61	82	51	S.	Clear, and nearly calm.
8	70	82	57	S.W.	Sunſhine.
10	77	82	65	S.W.	Scattered clouds.
12	84	84	70	S.W.	Ditto.
2	80	84	69	S.W.	Great clouds, and a briſk gale of wind.
4	79	84	70	S.W.	Scattered clouds.
7	69	84	63	S.W.	Ditto.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Wedneſday, July 31, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	67	82	57	S.W.	Cloudy; there had been rain in the night.
8	70	82	70	S.W.	Showers of rain.
10	80	82	70	S.W.	The ſun glimmers.
12	82	83	66	S.W.	Showery.
1	84	84	73	S.W.	Light clouds.
2	87	85	72	S.W.	Scattered clouds.
4	86	86	69	S.W.	Cloudy.
5	84	86	68	S.W.	Light clouds.
8	—	—	59	S.W.	Clear, and nearly calm.

In the morning the plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. The linings were raiſed with freſh dung rather higher than the ſurface of the mould in the frames. Air was given plentifully till 5 o'clock in the afternoon, when the lights were ſhut cloſe down, and covered up with mats for the night.

Thurſday, Auguſt 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	71	85	52	S.W.	Bright ſunſhine, nearly
8	80	85	59	S.W.	Ditto. [calm.
10	85	86	66	S.W.	Scattered ſmall clouds.
12	88	87	73	W.	Ditto.
2	88	88	73	W.	Ditto.
4	86	88	72	W.	Ditto.
6	79	87	68	W.	Sunſhine. [wind.
8	74	86	61	W.	Thin clouds, and a briſk

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted at 8 o'clock in the morning, and continued till 8 o'clock in the evening, when the lights were ſhut down for the night. The frames were uncovered about 6 in the morning, and covered up about 6 in the evening with double mats.

Friday, Auguſt 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	68	85	62	S.W.	Clear, and a briſk wind.
8	84	86	85	S.W.	Sunſhine.
10	86	87	71	S.W.	Scattered clouds.
12	87	87	76	S.W.	Ditto.
2	96	88	75	S.W.	Sunſhine.
3	92	88	77	S. E.	Ditto.
4	85	88	74	S. E.	Ditto.
6	79	88	70	E.	Ditto
8	—	—	62	E.	Thin clouds.

The frames were uncovered about 6 o'clock in the morning, and covered up about 6 in the evening with

with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given about 8 o'clock in the morning, and taken away about 6 o'clock in the afternoon.

Saturday, Auguſt 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	86	59	E.	Clouds here and there.
8	87	88	67	S.E.	Scattered clouds.
10	87	88	77	S.E.	Ditto.
12	85	88	78	S.E.	Ditto.
1	82	89	79	S.E.	Sunſhine.
2	81	89	78	S.E.	Thin clouds.
4	82	89	77	S.E.	Ditto.
6	76	82	74	S.E.	Cloudy, and nearly calm.
8	—	—	69	S.	Great thundry confuſed-like clouds ariſe from every quarter.
9	—	—	66	S.	It rains and thunders, and great flaſhes of lightning appear.

The frames were uncovered about 7 o'clock in the morning, and covered up juſt before 6 in the afternoon with double mats. The plants were gone over and ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted at 8 o'clock in the morning, and continued till between 5 and 6 in the afternoon, when I gave the plants a plentiful watering with water 75 degrees warm, and then ſhut the lights down for the night.

Sunday, Auguſt 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
7	78	87	60	S.W.	Thin clouds, and a briſk gale of wine.
8	82	87	66	S.W.	Flying clouds, windy.
10	81	88	70	S.W.	The ſun glimmers.
12	83	88	71	S.W.	Ditto.
1	79	88	70	S.W.	Cloudy.
3	79	88	70	S.W.	Ditto.
5	78	88	64	S.W.	It rains gently.
8	—	—	59	S.W.	Gloomy.

The frames were uncovered at 7 o'clock in the morning, and covered up between 5 and 6 in the afternoon with double mats. Air was given about 8 o'clock in the morning, and taken away about 5 in the afternoon.

Monday, Auguſt 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	76	87	57	S.W.	A thick fog, nearly calm.
8	77	87	62	S.W.	Foggy clouds.
10	82	88	67	S.W.	Scattered clouds.
12	87	88	72	S.W.	Sunſhine.
2	89	90	73	S.W.	Ditto.
4	90	90	70	S.W.	Flying light clouds.
5	84	90	65	S.W.	Showers of rain, and guſts of wind.
8	—	—	55	S.W.	Clear and calm.

The frames were uncovered about 6 o'clock in the morning, and covered up at 6 in the evening with ſingle mats. In the morning the plants were ſtopped, their

their leaves thinned, and the fruit in bloſſom ſet. Air was given a little before 8 o'clock in the morning, and continued day and night.

Tueſday, Auguſt 6, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	72	87	55	W. Clear, and a briſk wind.
8	84	87	59	W. Sunſhine.
10	85	88	64	W. Scattered light clouds.
12	89	90	68	W. Sunſhine.
2	87	90	72	W. Scattered ſmall clouds.
4	89	90	72	W. Ditto.
5	82	90	68	W. Ditto.
8	—	—	60	W. Clear and calm.

The frames were uncovered at 6 o'clock in the morning, and covered up between 5 and 6 in the evening with double mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued till about 7 o'clock in the evening, when the lights were ſhut cloſe down for the night. The dung of the linings having become rather dry and huſky, I had them well watered. To-day the water in the ſprings lowered the thermometer to 54 degrees.

Wedneſday, Auguſt 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	75	89	52	S.W. Clear; there is a great
8	83	88	60	S.W. Sunſhine. [dew.
10	85	89	67	S.E. Ditto.
12	88	90	74	S.E. Theſun glimmersthrough light clouds.
2	83	90	71	S.E. Cloudy; it looks rainy.
4	80	90	62	S.E. It rains and thunders.
4½	80	90	58	N.E. A heavy ſhower of hail and rain.
6	76	90	58	N. Gloomy. Great thick clouds come from the weſt, and others come from the eaſt, and mix with them; and quickly the wind turns to the weſt, and then a large black cloud goes over to the eaſt, and it becomes ſo dark for about a quarter of an hour, that a clear-ſighted perſon can ſcarcely ſee to read.
7	—	—	57	W. It has rained and thundered ſince 6 o'clock, with ſtrong guſts of wind accompanying.
8	—	—	56	N.E. Clear, except ſome clouds in the horizon.

In the morning the top of the linings was broken up about a foot deep, and well ſhaken, and then ſome freſh dung laid on the top of them, and after that plenty of water was poured upon them all round about. Air was given about 8 o'clock in the morning,

ing, and continued till 4 in the afternoon, when the lights were ſhut down for the night, and about 6 o'clock they were covered up with double mats. This morning we began to reap wheat, and to cut oats.

Thurſday, Auguſt 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	74	87	56	S.W.	Cloudy, and ſome drops
8	78	87	60	S.W.	Gloomy. [rain fall.
10	77	87	64	S.W.	Small drifting rain.
11	79	88	66	S.W.	Cloudy, and a briſk wind.
1	87	88	71	S.W.	Scattered clouds, windy.
2	84	88	71	S.W.	Ditto.
4	96	90	69	S.W.	Ditto.
6	88	91	64	S.W.	Ditto.
8	—	—	58	S.W.	Clear, and a briſk gale of wind.

The frames were uncovered at 6 o'clock in the morning, and covered a little before 6 in the afternoon with mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. About 11 o'clock water about 65 degrees warm was poured all round againſt the ſides of the frames, and on the mould above the flues. Air was given between 8 and 9 o'clock in the morning, and taken away between 3 and 4 in the afternoon.

Friday, Auguſt 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	75	88	57	S.W. Flying clouds, windy.
8	80	88	62	S.W. Ditto.
10	73	83	65	S.W. Cloudy, windy.
12	80	85	69	S.W. Scattered clouds, windy.
1	90	86	70	S.W. Ditto.
2	82	87	68	S.W. Ditto.
4	85	88	67	S.W. Ditto.
7	—	—	62	S.W. Ditto.
8	—	—	58	S.W. Clear, and a briſk gale of wind.

The frames were uncovered at 6 o'clock in the morning, and covered up in the evening with double mats. Between 8 and 9 o'clock in the morning the plants were well watered all over their leaves with water 64 degrees warm. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given in the morning, and continued day and night.

Saturday, Auguſt 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	77	86	61	S.W. Windy; there had been rain in the night, and a little falls this morning.
8	82	87	64	S.W. Thin flying clouds, windy.
10	80	87	67	S.W. Ditto.
12	86	88	71	S.W. Ditto.
2	85	89	70	S.W. Scattered clouds, windy.
4	84	89	72	S.W. Ditto.
5	81	89	69	S.W. Ditto.
8	—	—	57	S.W. Clouds here and there.

The frames were uncovered about 6 o'clock in the morning,

morning, and covered up juſt before 6 in the evening with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Sunday, Auguſt 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	68	85	53	S.W.	Clear, and a briſk wind.
8	72	85	59	S.W.	Thin ſtreaky clouds.
11	84	86	64	S.W.	Scattered thin clouds.
1	80	87	69	S.W.	Ditto.
3	80	87	69	S.W.	The ſky is mottled.
5	82	87	67	S.W.	Ditto.
8	—	—	60	S.W.	Clouds in the horizon.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night.

Monday, Auguſt 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	76	87	56	S.W.	Thin clouds, and nearly
8	70	86	60	S.W.	Ditto. [calm.
10	80	87	67	S.W.	Sunſhine.
12	92	90	71	S.W.	Ditto.
1	98	90	70	S.W.	Ditto.
2	90	91	73	S.W.	Ditto.
4	88	91	73	S.W.	Clouds here and there.
9	—	—	58	S.W.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued

continued day and night. To-day we began to cut barley, which was ſown in March.

Tueſday, Auguſt 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	74	87	59	S.E.	Thin ſtreaky high clouds, and a briſk wind.
8	78	88	68	S.E.	The ſun ſhines faintly.
10	84	89	74	S.	Clouds here and there.
11	86	90	78	S.	Ditto.
12	85	90	76	S.W.	Ditto.
2	84	90	79	S.W.	Thundry-like clouds.
4	80	90	72	S.W.	The ſky is overcaſt.
5	76	90	68	S.W.	A light ſhower.
8	—	—	64	S.W.	Beautiful red ſky in the weſt.

In the morning the plants were ſtopped, their leaves thinned, the weeds picked out, and the fruit in bloſſom ſet. The covering was taken off about 6 o'clock in the morning, and put on a little before 6 in the afternoon. Air was continued all day, and in the evening the lights were ſhut down for the night.

Wedneſday, Auguſt 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	70	88	51	S.W.	Clear, and a briſk wind.
8	80	88	58	S.W.	Scattered clouds.
10	82	89	67	S.W.	Ditto.
12	84	89	70	S.W.	Ditto.
2	85	89	72	S.W.	Clouds here and there.
4	78	89	68	S.W.	Ditto.
6	70	88	60	S.W.	Sunſhine.
8	—	—	56	S.W.	The ſky is overcaſt.

The frames were uncovered in the morning about 6 o'clock,

6 o'clock, and covered up in the evening with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given till 5 o'clock in the afternoon, when the lights were ſhut cloſe down for the night.

Thurſday, Auguſt 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	76	87	56	S.	Gloomy, calm ; it looks rainy in the ſouth-weſt.
8	73	87	67	S.	A light ſhower of rain.
10	80	87	67	S.	Sunſhine.
12	82	87	69	S.W.	Showery.
2	80	87	68	S.W.	Flying clouds, windy.
4	79	87	68	S.W.	Ditto.
5	78	87	64	S.W.	Ditto.
8	—	—	57	S.W.	Cloudy and windy.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with double mats. Air was given about 9 o'clock in the morning, and the lights were ſhut cloſe down in the evening for the night.

Friday, Auguſt 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	73	87	53	W.	Flying clouds; windy.
8	76	87	60	W.	Ditto.
10	77	87	62	W.	Ditto.
12	80	87	65	S.W.	Ditto.
2	84	88	64	W.	The ſun glimpſes.
4	88	88	63	W.	Ditto.
6	75	87	60	S.W.	Sunſhine.
8	—	—	55	S.W.	Clear, and a briſk wind.

The frames were uncovered at 6 o'clock in the morning,

morning, and covered up about half paſt 5 in the afternoon with double mats. Air was admitted at 8 o'clock in the morning, and continued till about 5 in the afternoon, when the lights were ſhut cloſe down for the night.

Saturday, Auguſt 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	85	53	S. E.	There had been rain in the night, and it rains this morning.
8	73	85	54	S. E.	Rainy and windy.
10	76	85	55	S. E.	It rains heavily.
12	82	86	54	S.W.	Showery and windy.
2	83	87	64	S.W.	Ditto.
4	80	87	60	S W.	Ditto.
6	—	—	57	S.W.	A ſtrong gale of wind;
8	—	—	55	S.	Ditto. [gloomy.

The frames were uncovered about 6 o'clock in the morning, and covered up about 5 in the evening with double mats. The plants were gone over, their leaves thinned, the ſhoots ſtopped, and the fruit in bloſſom ſet. But little air was given in the day-time, and at 4 in the afternoon the lights were ſhut cloſe down for the night. In the afternoon a layer of freſh dung was laid upon the north ſide lining.

Sunday,

Sunday, Auguſt 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	70	85	50	N.W.	Cloudy, and a high wind.
8	71	85	52	N.W.	Ditto.
10	80	85	57	N.W.	Cloudy, windy.
1	80	86	60	N.W.	The wind is fallen.
3	80	86	63	N.W.	The ſun glimmers.
5	78	86	59	W.	Cloudy, calm.
10	—	—	53	W.	Thin clouds; ſome drops of rain fall.

The frames were uncovered about 6 o'clock in the morning, and covered between 5 and 6 in the evening with double mats. Air was given in the day-time, but the lights were ſhut down all night.

Monday, Auguſt 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	85	48	S.W.	Thin clouds, nearly calm.
8	76	85	57	S.W.	The ſun ſhines.
10	86	85	62	W.	Clouds here and there.
12	95	87	69	W.	Sunſhine.
1	88	88	72	W.	Ditto.
2	90	88	65	W.	A light ſhower.
3	93	88	68	W.	Scattered clouds.
6	86	88	63	S.W.	Clouds here and there, nearly calm.
7	—	—	59	S.W.	Showery clouds.

The frames were uncovered at 6 o'clock in the morning, and covered up at 6 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given at 8 in the morning, and taken away between 4 and 5 o'clock in the afternoon.

Tueſday,

Tueſday, Auguſt 20, 1793.

Hours.	S.Th.	P Th.	Ther.	Wind.	
6	70	85	44	S.W.	Clear, and a great dew.
8	80	85	53	S.W.	Sunſhine.
10	82	85	58	S.W.	Ditto.
12	92	86	65	S.W.	Scattered little clouds.
1	90	87	67	W.	The ſun ſhines faintly.
2	84	87	67	W.	Ditto.
4	82	87	67	W.	Sunſhine.
5	89	88	65	W.	Ditto.
6	—	—	62	W.	Thin clouds, nearly calm.
8	—	—	55	W.	Clear and calm.

The frames were uncovered at 6 o'clock in the morning, and covered up about 6 in the afternoon with double mats. In the afternoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. About 4 o'clock in the afternoon, water 68 degrees warm was poured all round againſt the inſides of the frames, to moiſten the mould upon the flues. Air was given about 8 o'clock in the morning, and taken away between 4 and 5 in the afternoon.

Wedneſday, Auguſt 21, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	74	86	56	S.W.	Thin clouds, nearly calm.
8	74	86	58	S.W.	Light foggy clouds.
10	82	86	65	S.W.	Sunſhine.
11	87	80	70	S.W.	Ditto.
12	90	87	74	S.W.	Scattered light clouds.
2	91	88	74	S.W.	Sunſhine.
3	93	88	73	S.W.	Scattered clouds.
4	90	88	72	S.W.	Mottled ſky.
7	—	—	65	S.W.	Thin clouds, nearly calm.
9	—	—	60	S.W.	Clouds here and there; calm.

The frames were uncovered about 6 o'clock in

the morning, and covered up in the evening with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given at 8 o'clock in the morning, and taken away about 5 in the afternoon.

Thurſday, Auguſt 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	75	87	56	S.W. Thin clouds, and a briſk
8	77	87	62	S.W. Ditto. [gale of wind.
10	85	87	70	S.W. The ſun ſhines faintly.
12	88	88	76	S.W. Ditto.
2	87	88	74	S.W. Ditto.
3	84	88	73	S.W. The ſky is overcaſt.
6	80	88	64	S.W. Ditto.
10	—	—	57	S.W. Clear, and a briſk wind.

The frames were uncovered between 6 and 7 o'clock in the morning, and covered up in the evening with double mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted from 8 o'clock in the morning till about 5 in the afternoon. To-day the water in the ſprings lowered the thermometer to 54.

Friday, Auguſt 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	75	86	60	S.W. Cloudy, and a briſk wind.
8	76	86	63	S.W. Ditto.
10	77	86	67	S.W. Ditto.
12	85	86	71	S.W. A light ſhower.
1	90	87	73	S.W. The ſun ſhines faintly.
2	87	87	71	S.W. Sunſhine.
4	84	87	70	W. Ditto.
6	—	—	64	N.W. Ditto.
8	—	—	56	N.W. Clear, and a briſk wind.

The frames were uncovered about 6 o'clock in the morning,

morning, and covered up in the evening with mats. In the afternoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given at 8 o'clock in the morning, and continued day and night. To-day we made an end of harveſt.

Saturday, Auguſt 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	70	84	52	S.W.	Clear, and a briſk air of
8	74	84	57	S.W.	Ditto. [wind.
10	82	85	62	W.	Scattered clouds.
1	85	86	69	W.	Ditto.
2	87	86	68	W.	Ditto.
4	84	86	66	W.	The ſky is overcaſt.
6	80	86	61	W.	Cloudy, and a briſk wind.
8	—	—	54	W.	Thin clouds, nearly calm.

The frames were uncovered at 6 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night.

Sunday, Auguſt 25, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	68	83	46	W.	Clear, and nearly calm.
8	76	83	52	W.	Sunſhine.
10	87	84	59	N.W.	Scattered ſmoky - like
11	90	87	62	N.W.	Ditto. [clouds.
1	87	87	69	N.W.	Ditto.
2	90	87	68	N.	Sunſhine.
4	90	87	68	N.	Clouds here and there.
5	87	87	65	N.E.	Ditto.
9	—	—	50	S.E.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning. Air was continued day and night.

Monday,

Monday, Auguſt 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	61	81	44	S.E. Clear, and nearly calm.
8	76	83	55	S.E. Sunſhine.
10	81	83	63	S.E. Ditto.
12	87	84	74	S. Thin clouds, and a briſk wind.
3	88	85	71	S. The ſun ſhines faintly.
4	95	86	69	S.W. Ditto.
6	86	87	63	S.W. Cloudy, and nearly calm.
9	—	—	56	S.W. Cloudy, dark.

In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued till between 3 and 4 o'clock in the afternoon, when the lights were ſhut cloſe down for the night, and at 6 o'clock the frames were covered up with double mats.

The cucumber plants in the open ground are infected with the canker.

Tueſday, Auguſt 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	70	83	48	W. Clear, and a briſk wind.
8	78	83	55	W. Clouds here and there.
10	82	84	64	W. Flying clouds, and a briſk wind.
12	84	85	67	W. Ditto.
2	80	85	68	W. Ditto.
4	81	85	65	W. Sunſhine.
6	80	85	56	W. Clouds here and there.
9	—	—	50	W. Clear, and nearly calm.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with double

mats. Air was given about 8 o'clock in the morning, and continued till between 4 and 5 in the afternoon. The linings were raiſed all round with warm dung.

Wedneſday, Auguſt 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	71	82	53	S.W.	Cloudy, and but little
8	76	82	62	S.W.	Thin clouds. [wind.
10	82	83	68	S.W.	Cloudy, and a briſk wind.
12	67	77	69	S.W.	Ditto.
1	86	77	73	S.W.	The ſun ſhines faintly.
2	82	78	69	S.W.	Cloudy, and a briſk wind.
4	83	79	67	S.W.	A very light ſhower.
8	—	—	57	S.W.	Cloudy, and nearly calm.

The frames were uncovered about 6 o'clock in the morning, and covered up between 5 and 6 in the afternoon with double mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. About 11 o'clock to the plants of each three-light frame was given nearly a hogſhead of water, about 62 degrees warm; it was poured all over their leaves in imitation of a heavy ſhower of rain. After the watering but little or no air was admitted, and at 4 o'clock in the afternoon the lights were ſhut cloſe down for the night.

Thurſday,

Thurſday, Auguſt 29, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	81	56	S.W.	A thick fog, nearly calm.
8	80	82	57	N.W.	Bright ſunſhine.
10	86	83	64	N.W.	Ditto.
12	90	84	66	W.	Scattered light clouds.
3	87	85	70	W.	Ditto.
4	85	85	68	W.	Ditto.
6	80	85	63	W.	Clouds here and there.
8	—	—	54	W.	Clear, calm.

The frames were uncovered about half paſt 6 o'clock in the morning, and covered up in the evening with double mats. In the afternoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given from 8 o'clock in the morning till about 4 in the afternoon.

Friday, Auguſt 30, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	77	84	54	S.W.	It rains gently.
8	80	84	59	S.W.	Flying light clouds.
10	83	85	65	S.W.	Showery clouds.
12	80	85	68	S.W.	Light ſhowers.
1	88	85	69	S.W.	Great thundery clouds.
2	84	86	68	S.W.	Squally ſhowers.
4	80	86	63	S.W.	Cloudy, windy.
8	—	—	54	S.W.	Clear in the eaſt.

The frames were uncovered at 6 o'clock in the morning, and covered up in the evening with mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet.

Air was given from about 8 o'clock in the morning till between 4 and 5 in the afternoon.

Saturday, Auguſt 31, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	75	85	54	S.W.	Gloomy, and a briſk gale of wind.
8	77	85	59	S.W.	Showery light clouds.
10	80	85	65	S.W.	Cloudy, windy.
12	78	85	63	S.W.	Showery.
2	81	85	62	S.W.	Sunſhine, windy.
4	80	85	60	S.W.	Light ſhowers, and guſts of wind.
5	77	85	57	S.W.	A heavy ſhower for a few minutes.
7	—	—	55	W.	Clear, and a briſk gale of
9	—	—	50	W.	Ditto. [wind.

The frames were uncovered at 6 o'clock in the morning, and covered up in the evening with mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given from about 9 o'clock in the morning till between 4 and 5 in the afternoon.

Sunday,

Sunday, September 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	50	S.W. Gloomy; it looks rainy.
8	73	84	52	S.W. It rains gently.
10	75	84	57	S.W. Ditto.
12	74	84	60	S.W. Ditto.
2	72	84	58	S.W. It continues to rain.
4	73	84	60	S.W. Windy, and a ſmall rain.
9	—	—	55	S.W. Cloudy, windy, dark.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. But little air was admitted in the day-time, and none all night.

Monday, September 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	74	83	52	S.W. Clear, and a briſk gale of wind.
8	75	83	59	S.W. The clouds look rainy.
10	83	84	65	S.W. Showery and windy.
12	78	84	66	S.W. Ditto.
2	80	84	67	S.W. Flying clouds, windy.
4	76	84	62	S.W. Ditto.
6	74	84	58	S.W. Squally ſhowers.
9	—	—	50	S.W. Clear and windy.

The frames were uncovered about 6 o'clock in the morning, and covered up about 6 in the afternoon with mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given from between 8 and 9 o'clock till about 5 in the afternoon.

Tuesday, September 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	70	83	52	S.W.	Clear, and a ſtrong gale of wind.
8	75	83	58	S.W.	Flying clouds, windy.
10	74	83	61	W.	Ditto.
12	80	84	64	W.	Light ſhowers.
2	78	84	63	W.	Scattered clouds.
4	76	84	60	W.	Ditto.
6	79	84	57	W.	Clouds here and there.
9	—	—	48	W.	Clear, and calm.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with double mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given about 8 o'clock in the morning, and continued all day, and a little left at each light all night.

Wedneſday, September 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	69	82	41	W.	Clear, and nearly calm.
8	73	82	48	W.	Sunſhine, and a briſk gale
10	80	83	52	W.	Ditto. [of wind.
12	81	83	62	W.	Scattered clouds.
2	82	83	61	W.	Showery clouds.
4	81	84	54	W.	A heavy ſhower for about 10 minutes.
7	—	—	49	W.	Clouds here and there.
9	—	—	45	W.	Clear, calm.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with double mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Thurſday,

Thurſday, September 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	70	81	38	W. Clear, and nearly calm.
8	73	81	45	W. Sunſhine.
10	86	82	46	W. Ditto.
11	78	83	49	W. Calm; the ſun is covered with a light cloud, through which we clearly ſee the eclipſe of him: To appearance three fourth parts of him are darkened.
12	77	83	50	W. Clear, and nearly calm.
2	85	84	60	W. Cloudy.
4	82	85	58	W. Ditto.
6	—	—	52	W. Ditto.
9	—	—	45	W. Cloudy, and nearly calm.

The frames were uncovered at 6 o'clock in the morning, and covered in the evening with mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet.

Friday, September 6, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	44	S.W. Cloudy, and nearly calm.
8	72	82	48	S.W. Ditto.
10	79	82	57	S.W. The ſun ſhines faintly.
12	86	84	59	S.W. Ditto.
2	83	84	57	W. Great thundery clouds.
4	78	84	52	W. It rains and thunders.
7	—	—	45	N. Showery, nearly calm.
10	—	—	41	N. Clear, calm.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night.

To-day I had the ſouth ſide lining taken away, and a lining of freſh dung applied in its ſtead. The dung of the old lining was rotten and black, and but little heat in it, only a gentle warmth derived from the lining of the oppoſite ſide.

Saturday, September 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	33	S W	Clear, calm, and a white
8	70	78	38	S W.	Sunſhine. [froſt.
10	76	79	48	S.W.	Bright ſunſhine.
11	86	81	51	S.W.	Ditto.
12	87	82	54	W.	Ditto.
2	85	82	56	W.	Ditto.
3	90	83	56	W.	Ditto.
5	84	84	55	W.	Ditto.
9	—	—	48	W.	Clear, and nearly calm.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. The lining that was made up yeſterday, being ſunk, was [illegible] with new dung. Air was [illegible] day and

Sunday,

Sunday, September 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	50	S.W.	Foggy clouds.
8	73	80	58	S.W.	Light clouds.
10	76	81	65	S.W.	Showery-like clouds.
12	80	81	68	S.W.	The ſun ſhines faintly.
2	82	82	70	W.	Ditto.
4	82	83	67	W.	Thin clouds cover the ſky.
9	—	—	55	W.	Clear and calm.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. Air was continued day and night.

Monday, September 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	72	82	53	S.W.	Cloudy, and but little
8	74	83	57	S.W.	Thin clouds. [wind.
10	75	83	63	S.W.	Lowery.
12	84	84	67	S.W.	The ſun ſhines faintly.
2	82	84	65	S.W.	Clouds here and there.
5	80	85	63	W.	Ditto.
9	—	—	54	W.	Ditto.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with double mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night. To-day the water in the ſprings lowered the thermometer to 54.

Tueſday, September 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	52	W. Clear, and nearly calm.
7	70	84	55	W. Ditto.
10	80	84	65	W. The ſun ſhines faintly.
12	78	84	68	W. The ſky is overcaſt.
2	82	85	67	W. Cloudy, and nearly calm.
5	80	86	66	W. Sunſhine.
6	—	—	63	N. Clouds here and there.
9	—	—	57	N. Clear, calm.

The frames were uncovered about 7 o'clock in the morning, and covered up between 5 and 6 in the afternoon with double mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night. The ſouth ſide lining, being ſunk, was raiſed with hot dung, and then about a hogſhead of water was poured on it.

About 3 o'clock in the afternoon water was poured all round the ſides of the frames, and above the flues where the mould appeared dry.

Wedneſday, September 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	71	85	48	S.W. Foggy, nearly calm.
8	75	85	55	N.W. Light foggy clouds.
10	86	86	61	N.W. Sunſhine.
12	83	87	67	N.W. Flying light clouds.
3	84	87	62	N.W. Sunſhine.
6	81	87	57	N. Clear, calm.
9	—	—	50	N. Ditto.

The frames were uncovered about 6 o'clock in the morning,

morning, and covered up in the evening with double mats. In the afternoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given plentifully in the day-time, and ſome at every light all night. To-day a great heat is ariſen in the ſouth ſide lining.

Thurſday, September 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	46	N.	A thick fog.
7	76	87	49	N.	The fog begins to ſcatter.
8	81	87	53	N.E.	The ſun ſhines faintly.
10	88	88	60	N.E.	Bright ſunſhine, nearly
12	92	89	66	S. E.	Ditto. [calm.
2	88	90	72	S. E.	Ditto.
4	83	90	69	S. E.	Clouds here and there.
6	—	—	64	S. E.	Ditto.
9	—	—	57	S. E.	Cloudy, calm.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. Air was given plentifully day and night.

Friday, September 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	56	S.	Cloudy; there had been rain in the night.
7	75	88	57	S.	A heavy rain.
8	76	88	60	S.E.	It continues to rain.
10	83	88	64	S.E.	Fair, cloudy.
12	87	89	71	S.	Great towering white
2	80	89	70	S.	Showery. [clouds.
4	78	89	68	S.W.	Ditto.
6	75	88	63	S.W.	Cloudy, and a briſk wind.
9	—	—	54	S.W.	Cloudy.

The frames were uncovered about 7 o'clock in the morning,

morning, and covered up in the evening with double mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Saturday, September 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	56	S. Cloudy, and but little wind.
7	78	89	58	S. Ditto.
8	78	89	63	S. Ditto.
10	85	89	66	S. The ſun glimmers.
1	90	90	69	S. Ditto.
3	80	90	67	S. Cloudy, and a briſk wind.
5	78	90	65	S. Cloudy, and nearly calm.
9	—	—	57	S. It rains faſt.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with double mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Sunday, September 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	55	S.W. Cloudy; there had been rain in the night.
8	78	89	59	S.W. Cloudy, and a briſk wind.
10	84	89	68	S.W. Scattered great clouds.
11	86	90	69	S.W. Ditto.
1	83	90	65	S.W. Clouds here and there.
2	83	90	68	S.W. Large clouds with white
4	90	91	92	S.W. Sunſhine. [edges.
9	—	—	55	S.W. Showers of rain.

The frames were uncovered about 7 o'clock in the morning,

morning, and covered up in the evening with double mats. Air was continued till about 3 o'clock in the afternoon, when the lights were ſhut cloſe down for the night.

Monday, September 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	75	88	50	S.W.	Cloudy; there had been rain in the night.
8	76	88	54	S.W.	Sunſhine.
10	78	88	58	S.W.	Heavy ſhowers.
12	77	88	59	S.W.	Showery.
2	94	89	64	S.W.	Sunſhine.
4	83	89	60	S.W.	Ditto.
7	—	—	51	S.W.	Clear and calm.
9	—	—	48	S.W.	Ditto.

The frames were uncovered about 6 o'clock in the morning, and covered up about 5 in the afternoon with double mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given about 8 o'clock in the morning, and continued day and night.

Tueſday

Tueſday, September 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	44	S.W.	Clear, and nearly calm.
7	73	88	49	S.W.	Sunſhine.
9	76	88	54	S.W.	Ditto.
10	80	88	59	S.W.	Clouds here and there.
12	83	88	63	S.W.	Cloudy.
2	78	88	62	S.W.	Showery.
4	77	88	58	S.W.	Ditto.
6	74	88	56	S.	Ditto.
9	—	—	56	S.	Windy, and a ſmall rain.

The frames were uncovered about 7 o'clock in the morning, and covered in the evening with double mats. In the afternoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Wedneſday, September 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	58	S.	Gloomy; there had been rain in the night.
8	77	88	63	S.W.	Cloudy, and a briſk wind.
10	79	88	65	S.W.	A drifting rain.
12	80	88	69	S.W.	Gloomy, nearly calm.
2	79	88	65	S.W.	Light ſhowers.
4	77	88	65	S.W.	It rains faſt.
5	74	88	59	N.	The wind turns ſuddenly, and blows hard, and it rains heavily.
6	—	—	56	N.	It continues to rain.
9	—	—	54	N.	Fair, cloudy.

The frames were uncovered between 7 and 8 o'clock in the morning, and covered up about 5 in the

the afternoon with double mats. Air was continued day and night.

Thurſday, September 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	47	N. E.	Clear, and a briſk wind.
7	75	88	48	N. E.	The ſky is overcaſt.
9	80	88	53	N. E.	Thin clouds.
10	81	88	54	N.	Cloudy, and a briſk wind.
12	75	88	55	N.	Ditto.
2	76	88	54	N.	Ditto.
4	77	88	53	N.	Cloudy, and nearly calm.
6	74	88	50	N.	Ditto.
9	—	—	47	N.	Ditto.

The frames were uncovered at 7 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Friday, September 20, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	46	N.	Cloudy, gloomy.
8	79	88	49	N.	Ditto.
10	81	89	57	N.	Light clouds.
12	82	90	56	N. E.	A ſhower of rain.
2	90	90	57	N. E.	Sunſhine.
4	75	88	55	N. E.	Cloudy, and a briſk wind.
6	76	88	51	N. E.	Light clouds.
9	—	—	45	N. E.	Clear, and a briſk wind.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about three

three inches thick of hay and mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet.

About 4 o'clock in the afternoon I gave to each three-light frame of plants nearly half a hogſhead of water, warmed to about 83 degrees. It was poured all over their leaves, and every part of the inſide of the frames was well waſhed therewith. The lights were then ſhut cloſe down for the night.

Saturday, September 21, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	38	N.E. Showery; a rainbow in in the weſt.
7	78	89	41	N.E. Sunſhine, and a briſk
9	82	89	48	N.E. Ditto. [wind.
10	81	89	52	N.E. Clouds here and there.
12	85	90	54	N.E. It rains.
2	88	91	53	N.E. Sunſhine.
3	84	91	44	N.E. A ſhower of hail.
4	80	90	45	N.E. Showery.
6	75	89	43	N.E. Clouds here and there.
9	—	—	40	N.E. Ditto.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with hay and mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given about 8 o'clock in the morning, and continued day and night.

Sunday,

Sunday, September 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	40	N. Cloudy; there had been rain in the night.
8	76	89	43	N. A ſmall rain.
10	74	89	46	N. It rains.
12	75	89	46	N. Ditto.
2	74	88	46	N. It continues to rain faſt.
4	72	88	45	N. Ditto.
6	68	88	43	N. Ditto.
9	—	—	40	N. Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. But little air was given in the day-time, and in the evening the lights were ſhut cloſe down for the night.

Monday, September 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	40	S.W. Cloudy, and but little wind.
8	76	87	43	S.W. Ditto.
10	79	87	48	S.W. Ditto.
12	77	88	50	S.W. Ditto.
2	76	88	50	S.W. Ditto.
3	75	88	48	S.W. A ſhower of rain.
5	74	88	48	S.W. The ſun glimpſes.
9	—	—	44	S.W. Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up about 5 in the afternoon with about three inches thick of hay and mats. In the forenoon I ſtopped the plants, thinned their leaves, cut off ſeveral ſmall fruit where they were too thick,

and ſet the fruit in bloſſom. Air was given about 9 o'clock in the morning, and taken away about 5 in the evening. The linings being ſunk were raiſed with freſh dung.

Tueſday, September 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	42	S.W. Cloudy, and a briſk air of
8	76	87	50	S.W. Ditto. [wind.
10	80	87	54	S.W. Sunſhine.
12	85	88	56	S.W. The ſun ſhines faintly.
1	84	88	59	S.W. Ditto.
2	82	88	58	S.W. Showery.
5	77	88	54	S.W. Gloomy.
9	—	—	50	S.W. It rains heavily.

The frames were uncovered a little before 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was admitted about 9 o'clock in the morning, and continued day and night.

Wedneſday, September 25, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	45	N.W. A thick fog.
8	74	88	48	N.W. The fog begins to ſcatter.
10	81	88	52	N.W. Sunſhine.
12	95	90	58	N.W. Ditto.
1	100	91	60	N.W. Scattered clouds.
2	94	92	58	N.W. Ditto.
5	00	92	58	N.W. Ditto.
6	84	92	54	N.W. Ditto.
9	—	—	43	N.W. Clear, calm.

The frames were uncovered a little before 8 o'clock in

in the morning, and covered up in the evening with hay and mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Thurſday, September 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	35	N.	Clear and calm.
8	74	89	41	N.	Sunſhine.
10	85	89	51	N.	Scattered clouds.
12	82	89	61	S. E.	Ditto.
2	90	90	59	S. E.	Bright ſunſhine.
4	85	91	56	S. E.	Ditto.
9	—	—	43	S. E.	Clear and calm.

The frames were uncovered about 8 o'clock in the morning, and covered up between 5 and 6 in the evening with hay and mats. In the forenoon I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Air was continued night and day.

Friday, September 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	35	S.W.	Foggy.
8	74	89	43	S.W.	The fog becomes thin.
10	81	89	50	S. E.	Sunſhine.
12	86	90	57	S. E.	Ditto.
2	90	91	57	S. E.	Ditto.
4	83	91	55	S. E.	Ditto.
6	—	—	49	E.	Clear, and nearly calm.
9	—	—	43	E.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered between 5 and 6 in the afternoon with hay and mats. In the forenoon the plants

were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. About 11 o'clock, water 80 degrees warm was poured all round againſt the ſides of the frames, and on the mould above the ſide flues. Air was continued day and night.

Saturday, September 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	49	E. Foggy, nearly calm.
8	76	89	49	E. Ditto.
10	80	89	54	E. Sunſhine.
12	85	90	58	E. Ditto.
2	86	91	59	E. Ditto.
4	78	91	55	E. Ditto.
6	—	—	49	E. Clear, and nearly calm.
9	—	—	43	E. Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up a little before 6 in the evening with hay and mats. Air was continued day and night.

Sunday, September 29, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	42	E. Foggy.
8	78	89	50	E. The fog becomes thin.
10	87	89	58	S.E. The ſun ſhines faintly.
11	84	89	62	S.E. Ditto.
1	80	90	64	S.E. Ditto.
2	82	90	60	S. Cloudy.
5	75	90	55	S. Gloomy, nearly calm.
9	—	—	46	S. Cloudy, dark.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was continued day and night.

Monday,

Monday, September 30, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	47	S.W. Clear, and nearly calm.
8	75	90	50	S.W. Cloudy, and a briſk wind.
10	78	90	56	S.W. Ditto.
12	83	90	59	S.W. Scattered clouds.
2	76	90	57	S.W. Ditto.
4	72	90	54	S.W. Ditto.
9	—	—	46	S.W. Cloudy, dark.

The frames were uncovered about 8 o'clock in the morning, and covered in the evening with hay and mats. In the forenoon I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Air was continued day and night.

Tueſday, October 1, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	47	S.W. Rainy morning.
8	73	88	57	S.W. Flying clouds, windy.
10	75	88	64	S.W. Ditto.
12	75	88	65	S.W. Showers of rain.
2	72	87	61	S.W. Ditto.
5	72	87	57	S.W. Clear, and a briſk wind.
9	—	—	52	S.W. Cloudy and windy.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was continued day and night.

Wedneſday, October 2, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	45	S.W.	Clear, and a briſk wind.
8	71	86	49	S.W.	Sunſhine, windy.
10	76	86	56	S.W.	Ditto.
12	79	86	62	S.W.	Scattered clouds.
2	70	87	46	N.W.	A ſhower, a high guſt of wind, and loud claps of thunder.
4	68	87	52	N.W.	Scattered clouds.
5	68	87	46	N.W.	A ſhower of hail.
9	—	—	43	N.W.	Clear, and but little wind.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Thurſday, October 3, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	45	S.W.	Cloudy, and a briſk wind.
8	69	84	52	S.W.	Ditto.
10	78	84	60	S.W.	Ditto.
12	80	85	60	W.	Ditto.
2	72	85	63	W.	Ditto.
4	73	85	59	W.	Ditto.
9	—	—	52	W.	Cloudy, dark.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Friday,

Friday, October 4, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	50	S.W.	Cloudy, windy.
8	72	84	55	S.W.	Ditto.
10	74	84	61	S.W.	Flying clouds.
12	73	80	67	S.W.	Ditto.
2	70	80	66	W.	Ditto.
4	77	80	65	S.W.	The ſky is overcaſt.
5	75	81	60	S.W.	Ditto.
9	—	—	55	S.W.	Cloudy, dark.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. In the forenoon I cut the greateſt part of the ſhoots of the plants off, and I had all the mould taken off the ſide flues. The remaining ſhoots or branches of the plants were diveſted of the greateſt part of their leaves, and about two inches thick of fine freſh leaf mould laid among them. The ſhoots were then laid down with their joints among the freſh mould, and fixed with ſmall wooden pegs. The flues were then ſwept clean with a hair hand broom, and the plants were watered moderately all over their leaves, with water about 82 degrees warm.

Saturday, October 5, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	53	S.W.	Cloudy and gloomy.
8	80	84	57	S.W.	Ditto.
10	79	84	60	S.W.	Cloudy, and a briſk wind.
12	80	84	63	S.W.	The ſun ſhines faintly.
2	85	85	64	S.W.	Ditto.
3	90	85	63	S.W.	Ditto.
4	86	86	62	S.W.	Ditto.
9	—	—	52	S.W.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the

morning, and covered up in the evening with hay and mats. Air was continued day and night. To-day I fowed cucumber feeds in leaf mould about three inches deep in a pan, and I fet it in the cucumber frame on the north fide flue in the middle light of the middle frame, about one foot north of the thermometers; the feeds are of this year's faving.

Sunday, October 6, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	52	S.W.	Cloudy, and a briſk wind.
8	78	84	58	S.W.	Ditto.
10	79	84	61	S.W.	The ſun glimpſes.
12	86	85	65	S.W.	Ditto.
1	90	86	65	S.W.	Thin clouds cover the ſky.
3	80	86	66	S.W.	Ditto.
5	79	86	60	S.W.	Gloomy.
9	—	—	49	S.W.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about four inches thick of hay and mats. Air was continued till 5 o'clock in the evening, when the lights were ſhut down for the night.

Monday,

Monday, October 7, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	45	S.W.	Light clouds, but little wind.
8	80	85	50	S.W.	Sunſhine.
10	84	85	60	S.W.	Ditto.
12	90	86	61	S.W.	Light clouds cover the ſky.
2	101	87	59	S.W.	Sunſhine.
4	89	88	57	S.W.	Ditto.
6	—	—	52	W.	Clear, and a briſk wind.
9	—	—	49	W.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was given about 9 o'clock in the morning, and at 1 o'clock the plants, flues, and every part of the frames were ſprinkled with water 85 degrees warm, and the lights ſhut cloſe down for the night. The ſeeds that were ſown on Saturday appear double coming through the mould. To-day the dung of the north ſide lining was taken away, and a lining of freſh dung put in its ſtead.

Tueſday, October 8, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	46	W.	Clear, and a briſk wind.
8	78	83	51	W.	Clouds here and there.
10	77	83	57	W.	Ditto.
12	79	83	61	W.	Cloudy.
2	76	83	61	W.	Ditto.
4	72	83	58	W.	Ditto.
9	—	—	53	W.	Ditto.

The frames were uncovered about 8 o'clock in the morning.

morning, and covered up in the evening with hay and mats. Air was given from about 9 o'clock in the morning till 5 in the evening. The ſeedling plants are up, and their leaves begin to expand.

Wedneſday, October 9, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	52	W.	Cloudy, nearly calm.
8	79	83	55	W.	Gloomy.
10	80	83	58	W.	Thin clouds.
12	90	84	62	S.W.	Sunſhine.
2	91	85	64	S.W.	Ditto.
4	86	86	59	S.W.	Ditto.
5	80	86	55	S.W.	Clear, and nearly calm.
9	—	—	50	S.W.	Foggy.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. The plants were ſtopped, their leaves thinned, and ſome ſhowing fruit nipped off. The plants, from the ſeeds which were ſown laſt Saturday, were planted in pots in leaf mould, three plants in each pot, and ſet in a row on the north ſide flue.

Thurſday, October 10, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	41	S.E.	Miſty.
8	81	86	47	S.	Sunſhine.
12	86	87	62	S.W.	Ditto.
2	83	87	65	S.W.	Ditto.
4	80	86	62	S.W.	Clouds cover the ſky.
9	—	—	53	S.W.	Cloudy, dark.

The frames were uncovered between 7 and 8 o'clock

o'clock in the morning, and covered up in the evening with ſingle mats. Air was given at 8 o'clock in the morning, and continued day and night. The plants were ſhaded for about two hours in the hotteſt time of the day. About 4 in the afternoon the plants, flues, and every part of the inſides of the frames were watered with water about 80 degrees warm. The linings were raiſed with freſh dung.

Friday, October 11, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	50	S.W. Cloudy, nearly calm.
7	70	84	51	S.W. Gloomy.
8	71	84	52	S.W. Ditto.
10	73	83	55	S.W. Ditto.
12	79	83	59	S.W. Hazy.
1	81	84	60	S.W. Ditto.
2	81	85	60	S.W. Ditto.
4	80	85	59	S.W. Ditto.
5	79	85	58	S.W. Ditto.
9	—	—	54	S.W. Cloudy, dark.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with mats. Air was continued day and night.

Saturday,

Saturday, October 12, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	53	S.E.	Foggy, nearly calm.
7	79	85	54	S.E.	Ditto.
10	85	85	62	S.E.	Light clouds.
12	90	87	67	S.E.	Sunſhine.
1	91	87	67	S.E.	Ditto.
2	95	88	68	S.E.	Ditto.
4	83	88	64	S.E.	Light clouds here and [there.
9	—	—	56	S.E.	Clear, and nearly calm.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with mats. Air was continued day and night. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet.

Sunday, October 13, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	50	S.W.	Clear, and nearly calm.
8	77	86	55	S.W.	Light foggy clouds.
10	80	86	60	S.W.	Ditto.
11	87	86	66	S.W.	Sunſhine.
1	85	87	64	S.W.	Ditto.
2	86	87	63	S.W.	Ditto.
4	77	86	59	S.W.	Light clouds, nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with mats. The firſt rough leaves of the ſeedling plants, which were ſown the 5th inſtant, are fairly expanded.

Monday,

Monday, October 14, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	70	83	52	S.	Hazy.
8	72	83	52	S.	Ditto.
10	76	83	59	N.W.	Ditto.
12	81	84	62	N.W.	The ſun glimmers.
2	85	85	60	N.	Cloudy.
4	78	85	57	N.	Light clouds.
9	—	—	46	N.	Clear, nearly calm.

The frames were uncovered about 6 o'clock in the morning, and covered up in the evening with mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. In the morning, about 8, plenty of cold water was poured on the flues, and the plants were gently watered with water about 78 degrees warm, but not over their leaves. The flues were watered again in the evening. Air was continued night and day.

Tueſday, October 15, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	33	S.W.	Clear, and a white froſt.
8	64	80	37	S.W.	Sunſhine.
10	79	80	44	S.W.	Ditto.
12	84	82	50	W.	Ditto.
2	97	85	54	W.	Ditto.
4	84	86	51	W.	Ditto.
9	—	—	50	W.	Mottled ſky.

The frames were uncovered between 7 and 8 o'clock in the morning, and covered up in the evening with mats. Air was continued day and night.

Wedneſday,

Wedneſday, October 16, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	50	W. Cloudy, and nearly calm.
7	73	84	50	N. Ditto.
8	70	83	51	W. Clouds here and there.
10	84	84	54	W. Sunſhine.
12	85	85	58	W. Ditto.
2	95	86	57	W. Ditto.
4	80	86	55	W. Ditto.
9	—	—	46	W. Clear, nearly calm.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. At noon the flues were well watered with cold water, and the young plants in pots were watered with water about 80 degrees warm. Air was continued night and day.

Thurſday, October 17, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	43	W. Light clouds.
8	74	82	47	W. Hazy.
10	77	83	52	W. Ditto.
12	84	84	59	N.W. Ditto.
2	80	84	58	N.W. Ditto.
4	76	84	56	N. Ditto.
5	72	84	55	N. Ditto.
9	—	—	52	N. Cloudy, dark.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with mats. Air was continued day and night. The north ſide lining, being ſunk, was raiſed with hot dung.

Friday,

Friday, October 18, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	42	W. Misty, nearly calm.
8	67	80	45	W. Gloomy.
10	70	80	50	W. Ditto.
12	75	80	55	W. Ditto.
1	75	81	57	W. Ditto.
2	72	81	54	W. Ditto.
4	71	81	53	W. Ditto.
9	—	—	50	W. Cloudy.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with mats. In the forenoon I ſtopped the plants, thinned their leaves, and ſet the fruit in bloſſom. Air was continued day and night. The young plants have their ſecond rough leaves fairly expanded.

Saturday, October 19, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	42	W. Misty, nearly calm.
8	71	81	50	W. Cloudy.
10	72	81	51	W. Ditto.
12	75	81	54	W. Ditto.
2	72	81	55	W. Ditto.
4	72	81	53	W. Ditto.
5	68	80	51	W. Ditto.
9	—	—	50	W. Light clouds.

The frames were uncovered at 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was continued day and night. The plants were ſtopped, and the fruit in bloſſom ſet. The young plants were ſtopped for the firſt time; they

they are ſtrong and healthy, but rather long ſhanked.

Sunday, October 20, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	49	W. Cloudy.
8	69	80	50	W. Light clouds.
10	73	80	55	W. Ditto.
11	75	80	57	W. Cloudy, and a briſk gale of wind.
1	74	80	57	W. Ditto.
3	73	80	55	W. Ditto.
5	70	80	52	W. Ditto.
9	—	—	50	W. Ditto.

The frames were uncovered at 8 in the morning, and covered up in the evening with hay and mats. Air was continued till between 4 and 5 in the afternoon, when the lights were ſhut down for the night.

Monday, October 21, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
7	—	—	45	W. Clear in the weſt, cloudy in the eaſt.
8	78	83	45	W. Sunſhine.
10	82	84	52	W. Ditto.
12	90	85	57	W. Ditto.
2	80	85	57	W. Ditto.
4	82	85	57	W. Clouds here and there.
9	—	—	50	W. Ditto.

The frames were uncovered a little before 8 in the morning, and covered up in the evening with hay and mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given at 9 o'clock, and continued day and night. About noon the young plants were watered and ſhaded for

about one hour; at 4 o'clock plenty of cold water was poured on the flues. The linings, being ſunk, were raiſed with freſh dung and watered. Having prepared a nine-light bed for the young cucumber plants, to-day I had linings put to it. To the north ſide of the bed an entire new lining was applied, but to the ends and ſouth ſide only half a lining of new dung was applied, that is, about twenty inches of rotten dung was ſuffered to remain in the foundation of the ſouth ſide and end linings, ſo that the height of freſh dung laid on was only about twenty inches. The dung applied to the north ſide had lain in a ferment for ſome days, but that of the ſouth ſide was freſh from the ſtables.

Tueſday, October 22, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	49	W. Cloudy, nearly calm.
7	80	85	49	W. Ditto.
8	78	85	51	W. Ditto.
10	78	85	53	E. Hazy.
12	76	85	60	E. Ditto.
1	82	85	58	E. Ditto.
2	81	85	57	E. Gloomy.
4	75	85	54	E. Ditto.
9	—	—	59	E. Cloudy.

The frames were uncovered about 7 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. In the morning the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. The end linings were taken down about twenty inches, and made up with hot

dung. The bed for the young plants was covered up in the evening, five or ſix inches thick with hay and mats.

Wedneſday, October 23, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	46	E.	Hazy.
8	80	85	48	E.	Ditto.
10	81	85	53	E.	Light clouds.
12	84	86	58	S.E.	Ditto.
2	87	86	55	S.E.	Sunſhine.
4	78	86	52	S.E.	Light clouds.
9	—	—	44	S.E.	Ditto.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. Air was given day and night. About half an inch thick of fine mould was laid on the ſurface of the bed among the branches of the plants. The ſhoots of the plants are run thick and ſtrong to the ſides of the pits, and ſome of them are run upon the tiles of the flues. In the afternoon cold water was poured plentifully on the flues.

Thurſday, October 24, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	34	S.E.	Clear, and nearly calm.
8	74	83	38	S.E.	Sunſhine.
10	84	84	44	S.	Ditto.
12	80	84	51	S.W.	Thin clouds.
2	74	84	51	S.W.	Ditto.
4	73	83	49	S.W.	Ditto.
5	68	83	48	S.W.	Ditto.
7	—	—	44	S.W.	It rains a little.

The frames were uncovered about 8 o'clock in the morning,

morning, and covered up in the evening with about three inches thick of hay and mats. The air in the frames of the bed, to which a lining was applied on Monday laſt, being come to a proper degree of heat this afternoon, I planted the plants in it: In doing which I turned them out of the pots with their balls whole, and ſet three plants in each hill, covering their balls with fine mould, three inches up the ſtems of the plants above the ſurface of their balls. In the evening the lights of theſe frames were covered up after the ſame manner as that of the old bed. The young plants juſt planted are beginning to break forth their ſhoots after the firſt ſtopping.

Friday, October 25, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	45	S.W. Hazy.
8	77	84	47	S.W. Ditto.
10	75	83	52	S.W. The ſun appears faintly through lofty clouds.
12	79	84	56	S.W. Briſk gale of wind; it rains lightly.
2	72	83	53	S.W. Fair, cloudy, windy.
4	68	83	52	S.W. Ditto.
9	—	—	46	S.W. Cloudy, and a ſtrong gale of wind.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about three inches thick of hay and mats. In the forenoon the plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was given about 9 o'clock in the morning, and taken away between 4 and 5 in the afternoon. The air in the frames of the new

put out plants was kept to nearly the ſame degree of heat as above. The plants look well.

Saturday, October 26, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	55	S.W.	Cloudy, and a ſtrong gale [of wind.
8	80	85	57	S.W.	Ditto.
10	78	85	58	S.W.	Ditto.
12	80	85	59	S W.	Ditto.
2	76	84	58	S.W.	Ditto.
4	70	84	57	S.W.	Ditto.
5	74	84	56	S.W.	The clouds look rainy.
9	—	—	50	S.W.	Drizzling rain.

The frames were uncovered a little before 8 o'clock in the morning, and covered up in the evening with hay and mats. Between 4 and 5 o'clock in the afternoon the flues and mould cloſe adjoining to them were watered with cold water, and then the lights were ſhut down for the night.

Sunday, October 27, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	50	S.W.	Cloudy, and but little wind.
8	81	86	53	S.W.	Some drops of rain fall.
10	76	86	55	S.W.	Small rain.
12	80	86	58	S.W.	The ſun glimmers.
1	78	86	58	S.W.	Cloudy.
2	75	85	57	S.W.	Ditto.
4	72	85	53	S.W.	Clouds here and there.
9	—	—	44	S.W.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats.

mats. Air was given at 8 o'clock in the morning, and continued day and night.

Monday, October 28, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	36	S.W.	Clear, and but little wind.
8	76	85	39	S.W.	Ditto.
10	80	85	44	S.W.	Sunſhine.
12	85	85	52	S.W.	Ditto.
1	91	86	52	N.W.	Ditto.
3	90	86	51	N.W.	Ditto.
4	75	85	50	N.W.	Ditto.
9	—	—	37	N.W.	Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with about two inches thick of hay and mats. The plants were ſtopped, their leaves thinned, and the fruit in bloſſom ſet. Air was continued day and night.

Tueſday, October 29, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.	
6	—	—	44	S.W.	The ſky is red a good way up the horizon.
8	70	83	47	S.W.	Cloudy, and a briſk gale
10	72	83	53	S.W.	Ditto. [of wind.
12	75	83	54	S.W.	Ditto.
2	70	83	54	S.W.	Ditto.
4	68	82	52	S.W.	Gloomy, windy; the clouds look rainy.
7	—	—	51	S.W.	It rains.
9	—	—	51	S.W.	It rains heavily.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay

and mats. Air was given in the day-time, but the lights were ſhut down during the night.

Wedneſday, October 30, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	32	S.W. Clear; there had been a heavy rain in the night.
8	70	83	34	S.W. Sunſhine, but little wind.
10	76	83	37	S.W. Ditto.
12	80	83	42	S.W. Flying light clouds.
2	75	83	42	S.W. Clouds here and there.
4	70	83	40	S.W. A light ſhower.
9	—	—	33	S.W. Clear, and nearly calm.

The frames were uncovered about 8 o'clock in the morning, and covered up in the evening with hay and mats. Air was given at 9 o'clock in the morning, and continued till evening.

Thurſday, October 31, 1793.

Hours.	S.Th.	P.Th.	Ther.	Wind.
6	—	—	28	S.W. Clear, and nearly calm.
8	74	83	30	S.W. Ditto.
10	79	83	34	S.W. Sunſhine.
12	84	84	37	W. Ditto.
2	81	84	42	N.W. Ditto.
4	72	84	36	N.W. Clouds here and there.
5	70	84	32	N. Clear, and nearly calm.
9	—	—	29	N. Ditto.

The frames were uncovered at 8 o'clock in the morning, and covered up about 5 in the evening with hay and mats. In the morning the linings were raiſed with dung freſh from the ſtables. About noon the plants were ſtopped, their leaves thinned, and

and the fruit in bloſſom ſet, and the mould adjoining to the flues was watered with water about 80 degrees warm. The young plants were watered and ſtopped the ſecond time. Air was given a little before 9 in the morning, and taken away in the evening.

TO carry on farther the account of the management of the plants would be ſuperfluous. I have cut fruit from them in ten months of the year, and ſince they were cut in, their ſhoots laid, and the flues cleared of mould, which was done on the 4th day of October, the plants have ſtruck root afreſh, and are now, this 31ſt day of October, in a vigorous, healthy, flouriſhing ſtate, with fruit ſhowing plentifully, and ſome ſet; and if the weather prove favourable, perhaps fruit may be cut from them in November and December, and, by good management, they may be enabled to continue producing fruit during the greateſt part of the year 1794.

From the 2d of October 1793 to the 25th of January 1794, not the ſmalleſt grain of ſnow was perceived to fall at this place, and during that time but very little wind was ſtirring. On the 25th of January the wind from the weſt roſe very high, and about 1 o'clock ſome ſnow fell, and the mercury in the thermometer ſunk to 27.

Sunday, January 26, was clear all day, and a ſtrong gale of wind blew from the weſt.

Monday, January 27, 1794.

Hours.	S.Th.	Ther.	Wind.	
5	—	25	E.	It begins to ſnow, and the wind is boiſterous.
7	—	27	E.	The ground is covered with ſnow about 7 inches thick.
8	—	30	S.	The ſnow lies on the earth about 10 inches thick.
9	75	32	W.	Fair, windy.
10	69	30	W.	Sleet falls.
12	61	25	N.W.	It ſnows, and the wind is exceeding high: It blows quite a tempeſt.
2	67	30	N.W.	Clear, the wind is fallen.
4	61	26	N.W.	Clear, and a briſk wind.
8	—	21	N.W.	Clear, and nearly calm.

The frames were uncovered at 9 o'clock in the morning, and covered about 4 in the evening with about three inches thick of hay and mats. Air was continued day and night at every light.

APPENDIX.

THOUGH the newly-invented method exhibited in this book, has been but a ſhort time publiſhed, I have the pleaſure to behold, and know it to be put in practice and approved of by gardeners of much longer practice, and in ſome reſpects of greater abilities, than myſelf. Nor have I heard the invention ſpoken againſt by any perſon whatever. Indeed I have had from different parts of the country, the private congratulations of ſeveral ſtrangers, for, as they term it, "my ingenious invention." And for a public recommendation of the work, I can with ſatisfaction refer the reader and the curious to the CRITICAL REVIEW of January, the MONTHLY REVIEW of February, the BRITISH CRITIC of July, and the ANALYTICAL REVIEW of December.

Two years are now elapſed ſince I finiſhed writing this volume; and after that length of time, of additional experience, and a review of the work, I can ſee no reaſon for making any alteration or addition to the method therein held forth, one thing only excepted, viz. A gentleman near London, in the autumn of 1794, having built a bed after my plan, his gardener putting it into practice, loſt his plants ſeveral times in the courſe of the following ſevere winter.

Having

Having called on him, I no ſooner ſaw the inſide of his frames, than I explained to him the cauſe of his failure, which was occaſioned by the mould in which the plants grew, not being raiſed high enough above the flues, the flues left wholly bare of mould, and a powerful lining of hot dung high up againſt the ſides of the frames, quickly drying the flues, and thereby diveſting the air too much of its nutritive vegetative powers. By means of theſe, the leaves of the plants appeared as if they had been affected by the ſteam of rank hot dung.

In the treatiſe, I conceive, I have given ſufficient directions for guarding againſt ſuch unpleaſant conſequences; nevertheleſs, I ſhall here obſerve, that it is the ſafeſt way to keep the flues conſtantly, from the time the plants are put in during the winter, covered with about one inch thick of mould, keeping it moiſtened with water as occaſion requires.

By experience I find it a very good way to ſow the ſeed in the hills of mould in the fruiting bed, and to earth up the ſtems of the plants gradually as they advance in height. But this method cannot be practiſed without plenty of dung to begin with.

ADDISCOMBE PLACE,
November 1, 1795.